

The Electragist

Trade Mark Reg. U. S. Pat. Office.

Vol. 22, No. 12

Official Journal of ASSOCIATION OF ELECTRAGISTS—International.

OCTOBER, 1923



NO. 88
"HIPPO" Window FLOOD Light



NO. 33
Show Window FLOOD Light
This X-Ray Reflector Unit
is the ORIGINAL show win-
dow FLOOD Light. Thou-
sands are in use today.

Like every successful thing,
it has had imitators but, to-
day, this window FLOOD
Light leads the field. It uses
an ordinary 200 watt lamp
(White or color lighting).

And Now A Big Brother!

YES SIR! To the whole world we announce it! No. 33 now
has a Big Brother—"HIPPO" No. 88.

A little more powerful because he uses a 500 watt lamp—a
little more robust because his reflector is slightly larger—
and a mighty big help to the merchant who wants compelling
effects in his windows.

"HIPPO" is ideal for a large window. A flood of light and
a Center Spot Beam of 50,000 candle power intensity is a
combination that's hard to beat.

Order one for your own window! Then—see how quick you
sell the other stores in your neighborhood.

National X-Ray Reflector Co.

31 W. 46th Street
NEW YORK

229 W. Jackson Blvd.
CHICAGO

Pacific Finance Bldg.
LOS ANGELES

"The Best That Money Can Buy"

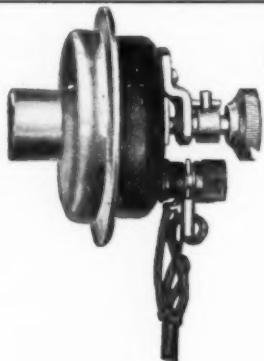


CAT. NO. 920

CAT. NO. 921

CAT. NO. 837

Micrometer Adjustable Air-Gap permits the pole pieces of the magnets to be brought closer or moved further away from the diaphragm, thus permitting maximum efficiency of reception of weak signals and preventing blasting and sticking on stronger signals.



Radio Loud Speakers and Phonograph Attachments

With Loud Speaking Units
equipped with

Micrometer Adjustable Air-Gap

Send for New Radio Price List

Manufactured by

STANLEY & PATTERSON

250 WEST STREET

NEW YORK, U. S. A.

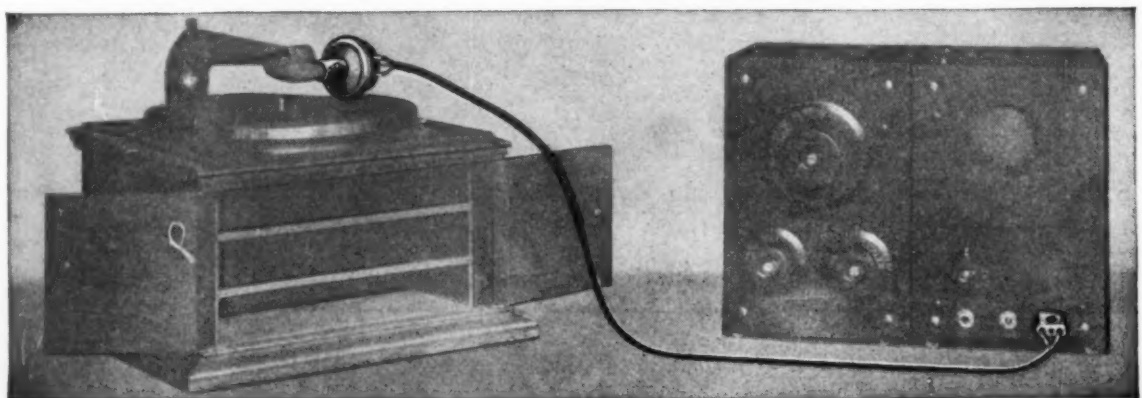


Illustration shows how Sounding Box of Phonograph can be turned into Radio Loud Speaker by using DeVeau Phonograph Attachment, complete with Sound Receiving Unit attached to Radio Receiving Station

"U.S." Paracore Wire

A Masterpiece of Wire Making

Each step in the manufacture of U. S. PARACORE Wire, from the drawing of the wire to the application of the finish is attended by the utmost in painstaking effort and technical skill. When finished it is a masterpiece of wire making.

Architects and Contractors, whose greatest pride is in their work, have selected U. S. PARACORE for some of the finest buildings in the world. They know the quality that is built into it.

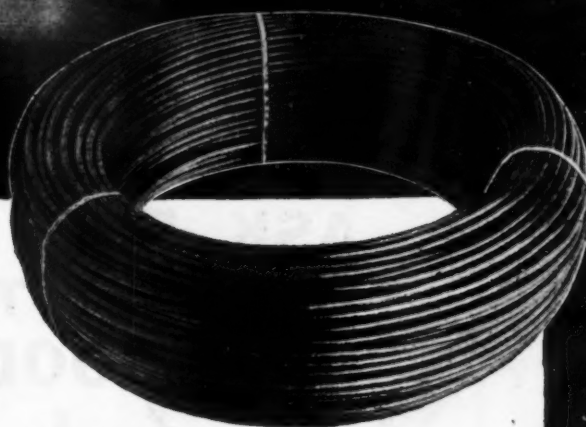
If it is a question of price there is no necessity for selecting an inferior wire. U. S. PARACORE costs no more than ordinary wire. Write for prices.

United States Rubber Company

1790 Broadway, New York



Trade Mark



Complete stocks carried in
following cities:

Atlanta
Baltimore
Buffalo
Chicago
Denver
Minneapolis
New Orleans
New York
Omaha
Philadelphia
Pittsburgh
San Francisco
Seattle
Salt Lake City
St. Louis
Syracuse

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

The Electragnet

(Trade Mark Reg. U. S. Pat. Office.)

The Official Journal Published Monthly
By the Association of Electragists—International.

FARQUSON JOHNSON
Editor and General Manager

R. F. PAIGE, Advertising Director.
CHICAGO OFFICE:
A. T. Sears, Peoples Gas Bldg.

CLEVELAND OFFICE:
H. W. Booth, 301 Ellastone Bldg.

JAY S. TUTHILL
News Editor

Volume 22

OCTOBER, 1923

No. 12

TO OUR READERS

All matter for publication must be in the hands of the Editor by the 10th of the month preceding publication.

All changes in our mailing list should be received by us two weeks prior to date of publication of the issue with which the change is to take effect.

TO OUR ADVERTISERS

Changes in advertisements and all advertising copy should reach our office not later than the TENTH OF THE MONTH previous to the date of issue.

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Copyright, 1923, by Association of Electragists—International.

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ASK FOR SAYLORDUCT THAT GOOD LOOM

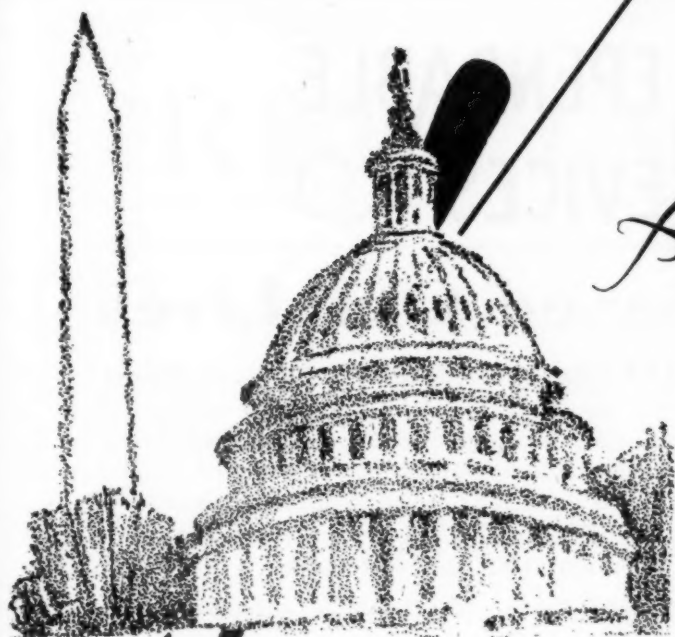
If you are looking for a tube that possesses all of the good features and none of the bad, use *Saylorduct*.



For sale by the Jobbing Trade everywhere. Look for the Duck.

Careful factory inspection insures *Saylorduct* against defects.

SAYLOR ELECTRIC & MFG. CO.
WHEELING, W. VA.



A Cordial Welcome to the A·E·I

ALL honor to one of the most aggressive working bodies in the industry.

We have long looked forward to the pleasure of greeting you personally in the "Nation's Home Town." Let us have this pleasure in our new home; it will be open house—just step right in and ask for Mr. T. L. Townsend or any other man of us, and feel free to make this your "head-quarters" for mail, information, stenographic assistance, etc. while in Washington.

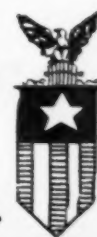
DON'T FORGET—let us know when you arrive. You'll find us located just around the corner from the Convention Hotel.

*Over Fifty Years
of Successful Service
To the Industry*



NATIONAL ELECTRICAL SUPPLY COMPANY

1328-30 N.Y. Ave., N.W. ~ WASHINGTON, D.C.



ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

WEBER DEPENDABLE WIRING DEVICES

"Elexits Have Saved Our Lives Several Times!"



PRINTERS BUILDING
Worcester, Mass.

Timmis and Chapman, Architects, New York

E. J. Cross Company, General Contractors
Worcester

Economy Electric Co., Electrical Contractors
Worcester

WHETHER in residence,
hotel, office building or in-
dustrial establishment, Elexits
provide the convenience, hereto-
fore unattainable, of movable
lighting equipment.

THE PRINTERS BUILDING in Worces-
ter, Mass., was built last winter and opened
for occupancy in March of this year. The ground floor
stores, and the fourth floor which is occupied by The
Davis Press, Inc., are equipped throughout with
WEBER ELEXITS. This is what The Davis
Press say about their installation:

The Davis Press
GOOD PRINTING
The Printers Building - 44 Portland Street
Worcester, Massachusetts

March 29, 1923.

Dear Mr. Burton:

We are at last in our new building. It is a mighty
fine one and we are tickled to be over here. As
yet we are hardly settled but every day makes a big
improvement so that by early April we expect to be
running normally again.

The Elexits have saved our lives several times. You
see we did not want to get all new fixtures over
here and could not take them down from the old place
until we were ready to clear out there. For a while
we were running presses in both places and it saved
us quite a little expense, as one press after
another was removed and reinstated in the new
quarters, to be able to take the light fixtures, put
elexit plugs on them and stick them up in the new
place. Then during the moving if there were no
lights in a corner where we happened to be working
on any particular job, we would slip the fixtures
out from another place and transfer them. It made
it mighty handy and our men are delighted with them.
We are also running on Weber fuses over here.

With best regards-

Yours very truly,

THE DAVIS PRESS

Wm. G. Davis
Treas.

WD/MQ

Mr. Frank V. Burton, Sales Manager,
Henry D. Sears,
Boston 11, Massachusetts.

CONSULT OUR CATALOG

HENRY D. SEARS

General Sales Agent

**80 BOYLSTON STREET
BOSTON 11, MASSACHUSETTS**

SALES REPRESENTATIVES IN:

New York
Birmingham

Philadelphia

San Francisco

Cleveland

Chicago
Los Angeles

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

GREETINGS!

We are looking forward with a great deal of pleasure to our annual re-union this year at Washington.

In realization of the benefits to be obtained by co-operation of all branches of the electrical industry, and believing that by coordinating the activities of manufacturer, jobber, contractor and utility—the ultimate consumer on whom after all our prosperity must depend, should have the best to be had at a reasonable price.

It gives us great pleasure at this time to call to your attention our latest developments in the safety switch line on display at the Hotel Washington. We hope to have the pleasure of a visit at our rooms with all of our old and new friends who have done so much to make our business possible.

The Trumbull Electric Mfg. Co.

Plainville, Conn.

NEW YORK
114 Liberty St.

BOSTON

CHICAGO
2001 W. Pershing Road
ATLANTA

SAN FRANCISCO
595 Mission St.
PHILADELPHIA

"Circleteed is Guaranteed"



That Something About
DURABILT PRODUCTS
which users like is *Quality*.

DURADUCT

Non-Metallic Conduit

DURACORD

Heavy Duty Portable Cords

DURAFLEX

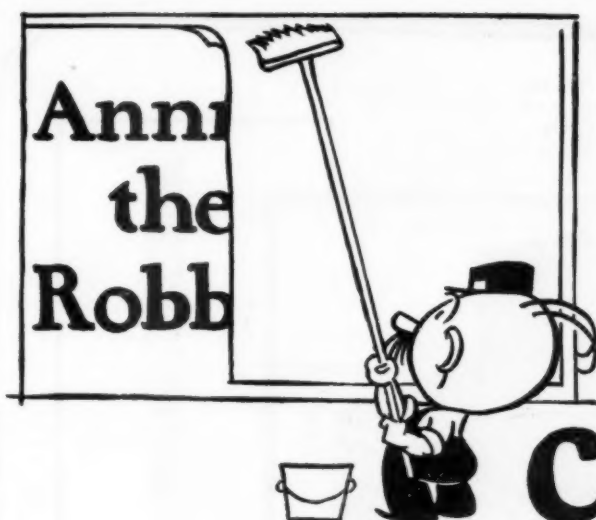
Armored Conductor

DURAWIRE

Rubber Covered Wire and Flexible Cords

TUBULAR WOVEN FABRIC CO.
PAWTUCKET, R. I.

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST



Coming Soon!

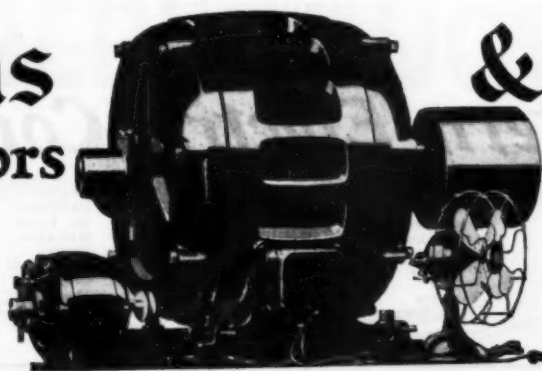
One month hence we shall have a very important announcement to make—which following the advertising of our new type "L" Polyphase Motor is destined to excite wider interest in the Robbins & Myers line than anything that has occurred in years.

This announcement will be broadcasted nationally and will provide a tremendous impetus to the sale of R & M Motors. To dealers it means the value of an R & M franchise will be greater than ever before.

You will find it well worth your while to read our announcement in the *Saturday Evening Post*, November 3rd issue, and in this magazine next month.

THE ROBBINS & MYERS COMPANY
Springfield, Ohio Brantford, Ontario

Robbins **& Myers**
Motors **and Fans**



ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

Method of Packing No. 18, Type C, Lamp Cords—Other Types and Sizes Packed in Coils

We were pioneers in using this method of identifying Flexible Cord.



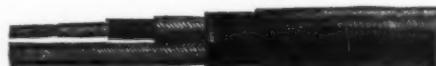
**Lamp Cord—
Type C**

Single or twisted pair with cotton or silk braid over each conductor.



**Parallel Cord—
Type PO**

Has cotton braid over each of two conductors laid parallel under cotton or silk outer braid.



Vacuum Cleaner Cord

This Flexible Cord is especially constructed for vacuum cleaners. It has all the strength desired and yet is small in size and extremely flexible. The conductors of this cord are composed of a number of flexible copper strands, assembled into a cable having extreme flexibility. Cotton wrapped, insulated with 1/64 inch wall of New Code rubber compound and cotton braided. A rubber jacket of New Code insulation is then placed over the twisted conductors, after which it is braided with a close non-fraying braid of fastblack cotton.



Heater Cord

The conductor consists of a number of small copper strands grouped into a cable of the required capacity, cotton wrapped insulated with a thin wall of rubber compound, asbestos covered. Two of these finished conductors are then twisted together and braided over all with cotton of any desired color combination. Standard color is black. This cord can also be furnished in parallel form, also with conductors braided separately, etc.

Western Electric Flexible Cord

Western Electric Flexible Cords are uniformly high in quality.

To secure this high quality and to maintain its uniformity, thorough inspections are made after each step in the making. It will pay you to use Western Electric Flexible Cords as it is paying others. The favor in which they are held makes us the largest distributors of Flexible Cords in the trade.

We can serve you from 48 Houses. They carry stocks.

Ask our House near you for prices.

A
National
Electrical
Service

Western Electric Company

New York
Brooklyn
Newark
Syracuse
Buffalo
New Haven
Boston
Providence
Pittsburgh

Philadelphia

Atlanta
Savannah
New Orleans
Birmingham
Jacksonville
Richmond
Norfolk
Charlotte
Youngstown

Chicago
Indianapolis
Detroit
Milwaukee
Grand Rapids
Cleveland
Minneapolis
St. Paul
Duluth
Baltimore

Kansas City
Oklahoma City
St. Louis
Memphis
Omaha
Cincinnati
Columbus
Nashville
Dallas

Houston

San Francisco
Oakland
Los Angeles
Seattle
Portland
Spokane
Tacoma
Denver
Salt Lake City

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**Here Is
the New "4-in-1" Carton—
for 7/32-inch Alphaduct**

¶—another step forward in Alphaduct Service to our Jobbers and Electrical Contractors.

¶ Now one sturdy shipping carton contains four regular cartons each (as heretofore) containing 250 feet of ALPHADUCT.

¶ This adds a great deal to convenience in stocking by the job-

ber. It facilitates reshipment of orders covering one or more 250 foot lengths.

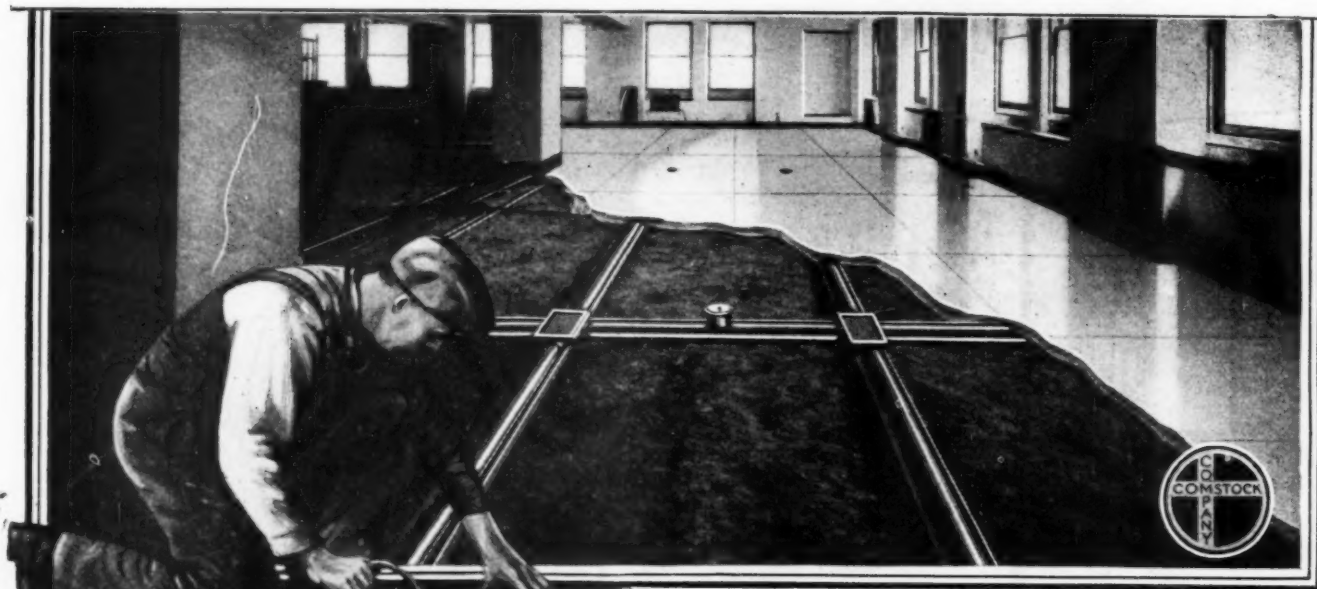
¶ You already know the unusually good qualities of ALPHADUCT—we can't see where we can improve it but we did improve the carton *for your benefit*.

**ALPHADUCT
COMPANY**

Jersey City, New Jersey

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

ORANGEBURG Patent app. for UNDERFLOOR DUCT SYSTEM



*American Telephone and Telegraph Building,
New York City
Installation by L. K. Comstock & Co., N. Y.*

A permanent system of electrical distribution for office buildings

ORDINARY wiring methods can only keep pace with the ever changing requirements of office building tenants through a constant patching up of the original system—which is both expensive and unsightly.

The Orangeburg Underfloor Duct System is permanent—the original system has an adaptability which permits it to meet new requirements without the necessity of tearing up the floor, or the use of makeshift cables and mouldings.

The grid of underfloor duct reaches all parts of the floor plan. Outlets can be installed at any point for any type of electrical service. New wiring can be drawn through to serve these outlets if necessary.

This disposes of the difficult problem of trying to make an inflexible system flexible. It assures that the building will always have an efficient and economical wiring service.

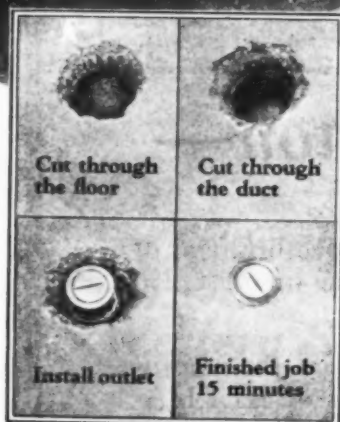
JOHNS-MANVILLE Inc., Madison Ave., at 41st Street, New York City

Branches in 59 Large Cities

For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

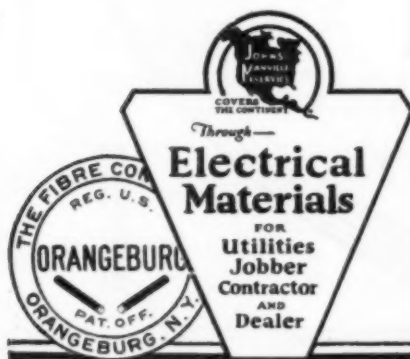
JOHNS-MANVILLE

SOLE SELLING AGENT



ABOVE—Handholes permit new wiring to be drawn through Orangeburg Underfloor Duct at any time without disturbing the floor.

BELOW—New outlets can be installed in any part of floor by merely drilling a small hole which the outlet fills.



BARD-PARKER WIRE INSULATION STRIPPER

A Tool that Saves Time and Money

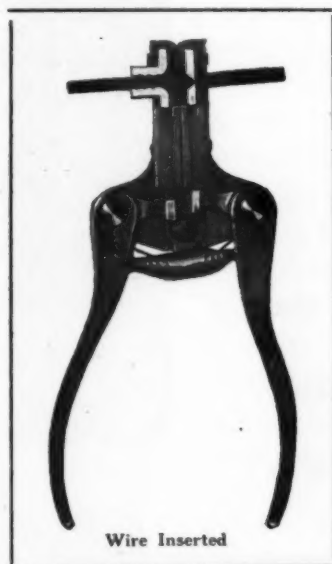


WORKS like a pair of pliers. Cuts and strips the insulation in the time required to close your hand. Makes a clean job, without nicking, fraying or jerking the wire. Saves your hands and your knife and your time.

This tool is ruggedly made to withstand ordinary shop abuse. New interchangeable blades always obtainable for almost any class of work.

Adapted to fast quantity production, as well as to general wiring uses.

EQUIPMENT



No. 1 Tool—Regularly equipped, unless otherwise specified, with 3-hole stripper blades for No. 11 gauge wire and smaller.

Alternative single-hole stripper blades, fitting above tool, for Nos. 10 to 22 gauge wire, as specified.

We suggest that you submit with your order, samples of wire to be stripped.

PRICE, \$5.00

F. O. B. New York

Extra Stripper Blades, 60c. pair
Any of above sizes

Write for further particulars.



BARD-PARKER COMPANY, Inc.

150 LAFAYETTE STREET

NEW YORK, N. Y.

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SHALLOW TUMBLER SWITCH

*What puts this Switch
in the
Shallow
Partition?*



**Lower Prices—to Insure
Its Fitting-in *Everywhere!***

The Shallow Tumbler (by H&H) now sells for exactly the same as the always popular-priced "NUTMEGS."

At the new low price, it will better serve the contractor's need, in getting into competitive bids his *own* idea of switch-quality.

The now uniform rates on *all* H&H Shallow Switches add to their availability as a complete line—for general use and ready sale for all work.

*Take Advantage of the Price Change and
the New Openings for Better Installations*

Let us lay before you the listings and necessary data on the Shallow Tumblers, in a circular you can use and file. Prompt response with the circular; immediate delivery on the switches.

THE HART & HEGEMAN MFG. CO. HARTFORD, CONN.

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST



"—and a Cup of Coffee"

The menu card includes many tasty and expensive suggestions. Diners scan it for the particular dish that appeals to their palates and their pocket books.

They have different tastes and their demands take different forms,—until the grand and glorious finish. Then comes the almost universal order—"and a cup of coffee."

At the end of the day the restaurant proprietor has made more money on sales of coffee, than on any one of his expensive items.

How like the electrical supply business! Lamps, Fans, Irons, Toasters, all must be stocked to cater to different demands. Yet the users of all of them must purchase wiring devices.

And just as with the coffee—the total profit on wiring device specialty sales means much in dollars and cents at the end of the day.

It's the little things that count after all. And wiring devices are little things.



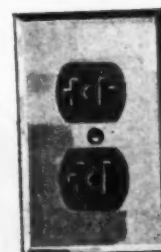
No. KE



No. 651



No. 117



No. 122-550

"A Superior Wiring Device for every Electrical Need"



THE BRYANT ELECTRIC COMPANY
1421 STATE ST., BRIDGEPORT, CONN.

NEW YORK
342 Madison Ave.

CHICAGO
844 West Adams St.

SAN FRANCISCO
149 New Montgomery St.

Look for this Trade Mark!



There is no longer any need of accepting inferior imitation for genuine "BX".

This "BX" identification mark will hereafter protect you on all purchases of armored conductors.

Look for the "BX" mark every few inches along the armoring, it may save you some costly "come-backs".



Sprague
Conduit Products

General Electric Company
Merchandise Dept. Bridgeport, Conn.

GENERAL ELECTRIC

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

435-104



Two Useful Products for Motor Repair and Manufacture

For resale to electrical manufacturers or motor repair shops (or for a variety of other purposes) the General Electric Company offers to the trade

G-E Flexible Varnished Tubing and G-E Soldering Paste

two products of its research laboratories, especially designed for use in assembling G-E apparatus.

G-E Flexible Varnished Tubing is furnished in two-foot lengths with inside diameters from $1/32$ of an inch to $1/4$ of an inch and in four colors—red, green, black and yellow. It does not crack on the shortest turns and may be carried in stock for long periods without deterioration.

G-E Soldering Paste is dependable for use with all metals, except aluminum and is non-corrosive, efficient and economical. It is packed in 2-ounce, 1-pound, 10-pound and 25-pound containers.

Ask any G-E Distributor for price and discounts.



General Electric Company
Merchandise Department
Bridgeport, Connecticut

GENERAL ELECTRIC

48G-11



How Much Lamp Cord Are You Selling?

There is a market for lamp cord worth going after. It is roughly estimated upon competent authority that over 125 million feet of lamp cord is sold each year. The dealers who sell it are the ones who try by keeping it in sight, on the principle that "well displayed is half sold."

G-E Lamp Cord is a quality product. It offers a wide selection of colors in silk or cotton and it stands up in service. Packaged attractively with the blue and orange label it makes excellent shelf merchandise with which to go after *your* share of the annual lamp cord sales—and there is a G-E display cabinet that is a sure "silent salesman" for silk cord and keeps it in perfect condition. It can be purchased by any dealer at a nominal figure.

*Get your lamp cord out from under the counter
—AND KEEP IT OUT.*



Lamp Cord

All G-E Lamp Cord is packed in the convenient blue and orange labelled carton shown above. For prices address any G-E distributor or

General Electric Company
Merchandise Department
Bridgeport, Conn.

GENERAL ELECTRIC

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37-42

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On to Washington

The time has arrived for the twenty third annual convention of the Association of Electragists—International. This event will take place at Washington, D. C., next week, the first regular session being held on Tuesday, October 9.

Prospects point to a large attendance. The National Capital, while always offering many attractions, is particularly attractive in the autumn days, and many will find occasion to enjoy their final vacation of the year at the convention.

One thing is certain, the Washington electrical interests are not overlooking any opportunities of making the affair a success. Not only members of the A. E. I., but all others of the electrical fraternity are putting forth united efforts to insure the convention visitors a royal good time.

The program is of unusual interest, what with an electrical play in the hands of real talent, two debates on subjects of live interest, the Eidlitz Plan explained, a session of Sectional meetings conducted by capable leaders, free for all talks and discussions of all kinds—there is as assured a series of sessions filled with interest and highly enlightening to every electrical man or woman.

Preceding the convention the Executive Committee of the A. E. I. will meet on Monday, October 8, and the following day, Tuesday, morning and afternoon sessions of the convention will be held at the official headquarters, the Hotel Washington.

Everybody is invited. All sessions are open to all. The hospitable Washington committees await with open arms. Welcome is the watchword. On to Washington!

Super Standard Installations

Considerable interest was aroused in the electrical industry when it was announced that the Association of Electragists had taken up the question of insurance rates as applied to the quality of the electrical work. This matter was widely discussed at the Executive Committee meeting of the A. E. I. held in New York City last March and plans were made to give it further consideration.

Following the March meeting it was found that some opposed the plan because it was thought to be unfeasible; others did not believe that it would tend to improve the quality of installations; and yet there were seemingly few sound arguments against it in the judgment of those favoring the idea.

However, discussions of the subject continued to such an extent that it was deemed advisable to give it a place on

the program of the annual convention of the A. E. I. to be held this month. Accordingly the following resolution was framed as a basis for a debate:

WHEREAS, The rate of fire insurance is based on hazards of building construction; and

WHEREAS, Super standard electrical installations would reduce hazards of fire from electrical causes; and

WHEREAS, Reduction in rate for super standard installations would

- (1) be in the interests of the public;
- (2) improve the quality of electrical construction;
- (3) tend to build up good will in the industry;

THEREFORE BE IT RESOLVED, That such a plan is desirable and feasible.

Leaders of the affirmative and negative sides of the question have prepared their arguments and those who wish to express their opinions on the subject will be asked to join the debate.

Judging from the interest already shown in various branches of the industry it would seem that the electragists have started something worthy of note. At any rate a full discussion of the subject can harm nobody, and it is hoped that eventually much good to the industry will result from it.

Searching for a New Name

Two years have passed since the word Electragist was adopted at the convention of the National Association in Buffalo, and now comes the news from across the ocean that our English cousins are looking for a new name for "electrical contractor". But this is more than coincidentally significant. It proves our contention that the word Electragist was and is necessary to take the place of the clumsy expression "electrical contractor dealer", and indicates a decided spirit of progressiveness on the part of the men in England in this branch of the electrical industry.

The movement in Great Britain is being championed by the Electrical Contractors Association of England, an organization with aims and purposes similar to the Association of Electragists in this country. It is obvious that the people on the other side of the water have the same feeling toward the term "electrical contractor" that we have in regard to "electrical contractor dealer"—that it is clumsy and awkward and misleading to the public.

One electrical contractor expressing his views to THE ELECTRICAL CONTRACTOR, the official magazine of the English Association, said: "I feel very strongly on this point, and have done so ever since I went into business, and never have cared for the name 'electrical contractor'. We

in this Association are doing our utmost to encourage the sales side of the business and develop showrooms, and it is obvious that we shall require another name in place of 'contractor'. We know in the trade what is meant by 'contractor', but the layman does not know."

The only exception we can take to this writer's views is in regard to the term he selects to take the place of "electrical contractor". "Electrician" is his choice, and everybody in the electrical industry at least should know that this term has even a greater multitude of meanings in the mind of the public than "electrical contractor".

No matter what your work is, if you are connected in any way with the many and varied functions of electricity you are an "electrician", thinks the man in the street. This appellation is pinned on the bell hanger, the electrical engineer, the curbstoner, the bona fide electrical contractor or dealer, the electrical jobber, the manufacturer, the central station man, all the representatives of any of these men, the telegraph operator, and the telephone man—all in one breath.

"Electrician" therefore will not do as another, and proper, term for "electrical contractor". It is to be regretted that our cousins cannot adopt the word Electragist. But they are on the right track in placing their individual choice of names before the industry and the public in the way they are. Some day they will awaken to find that the need has been supplied by a bright mind of the industry—perhaps under just such a setting as that of the A. E. I. convention at Buffalo two years ago.

Stick to the Code

From time to time the editor receives letters from electragists transmitting copies of local ordinances and pointing with pride to some requirement which is believed to be in advance of the standard generally accepted throughout the country.

There is, and always must be, considerable difference of opinion as to the features of licensing, control of contractors, constitution of the license board, and fees. Probably it would prove impracticable to develop a model ordinance covering these features which would be generally acceptable. The attitude of the public toward these problems varies with the locality.

But when we come to the technical requirements of an ordinance, we are unable to share a correspondent's enthusiasm over some departure from the National Electrical Code, even if the difference extends only to an "improved" arrangement of the Code text. It is our contention that the industry is best served when Code requirements are copied verbatim and in the order in which they are printed, even the system of numbering being retained. As an illustration of an ordinance, good in this respect, we cite that of the City of New York, in which article 2 contains class A, article 3 class B, and so on; so that No. 28i of the Code appears as 428i of the ordinance.

It is, of course, true that local conditions impose some local requirements; but these can ordinarily be cared for by the addition of a sentence here and the omission of a clause elsewhere, retaining the Code arrangement. And the departures will be found to be limited in number and scope if one makes the effort to meet a condition without wrenching the Code apart. Even so large a subject as the placing of the territory within the fire limits on an "all

metal" basis can be cared for by a simple prohibiting sentence added to Nos. 26g, 26i, 26k, 26l and 26q.

Uniformity of arrangement and phraseology of one ordinance with another is extremely desirable, from whatever angle viewed. The 1923 Code offers an improved arrangement. The Association of Electragists has had a hand in its making and is obliged to endorse it. This is not enough. Each electragist should deem himself personally responsible, in his own bailiwick, for seeing that the desired uniformity with the accepted national standard is maintained locally.

How to Know Costs

It may be all right for a one man business in its early stages to figure costs on the back of an old envelope. Running accounts can be kept in the head—if the accounts are few and the head is empty enough. This can be done temporarily; but unless more efficient methods eventually are employed, the business will not grow—it soon will become a one horse business, with a different variety of the equine family as its sponsor.

It is reported by the president of the Association of Electragists, after his return from a trip across the country last July, that in many sections visited business was flourishing, but that contractor-dealers were not making any money as a rule. One of the principal reasons for this deplorable state of affairs, it was pointed out to them, is that they do not know their costs.

Without fear of contradiction it may be further stated that not many of them know how to find their costs. When they start to figure a job they go floundering around in the dark, wondering what this costs them and what that costs them, and they have no reliable means of ascertaining what were the costs on a similar job which they have done previously.

Some years ago the Association anticipated such a condition. It adopted the Standard Accounting System by which costs can be figured accurately at all times—during the process of the operation and when the job is finished. The forms that accompany this system are designed to bring every user around to putting everything down in black and white, and preserving it for future reference. The system is complete, accurate, and simple.

Last year the A. E. I. issued the Manual of Estimating, on which the Cost Data Committee had been working for years. It is always the last word in time studies of labor costs, for it is being further refined and will be reissued from time to time in order to keep it up to date. The estimating forms that accompany the Manual are a further aid to those who would know their costs.

And yet electragists are complaining because they are not making a profit! Whose fault is it? Commissioner Eidlitz of New York City proved to the satisfaction of all parties concerned that the contractors themselves were to blame, because they did not know their costs. It cannot be that the situation is different in other sections of the country.

Costs can be known. They can be figured accurately. The methods and systems are at hand. The printed forms of the Association of Electragists, not only assure accuracy in cost finding, but also save time, labor, and expense. Surely there is no excuse for any contractor-dealer in the land not knowing how to learn his costs and always figuring them correctly.

If I Were an Electrical Contractor-Dealer

By J. E. NORTH

President Cleveland League Lays Down Some Fundamental Factors Necessary to the Successful Conduct of an Electragist Business

Judging from investigations and surveys which have been made, it is apparent that there must be some better plan of convincing the public that certain electrical equipment is equally as important and necessary in the home as the plumbing equipment and some of the articles of furniture which we have seemingly inherited the desire for.

As we stop to consider former as well as present day plans, we might ask ourselves a few questions:

First—Isn't it lack of volume that brings the most discouragement to the contractor dealer?

Second—Isn't it a fact that most contractor-dealers are attempting to serve entirely too much territory?

Third—Isn't it possible to serve a community of 25,000 people more economically than one of a million people?

Fourth—Isn't it possible for the contractor dealer to build more confidence by continuing to serve a reasonable number of customers all of the time rather than a large number part of the time?

Fifth—Isn't it reasonable to expect that at least twenty-five percent of the homes in a community will be completely equipped electrically during the next ten years?

Then let us consider the possibilities for the community contractor-dealer who starts out to serve a total of one thousand homes which are owned by the occupants.

In the following, deductions have been made to include equipment and articles previously purchased:

One thousand homes are to be electrified during the next ten years—
Convenience Outlets—An average of 10 per home or 10,000 at \$5 each... \$ 50,000
Lighting Equipment—Lamps, Shades, New Fixtures and Portable Lamps—estimated at \$50 per home..... 50,000
Laundry Appliances—
 Washing Machines
 30 percent or 300 now in use
 700 at average of \$135..... 94,500
 Dryer
 Number in use (—?) say 5 percent
 950 at \$200 each..... 190,000
 Ironing Machine
 5 percent or 50 now in use
 950 at average of \$150..... 142,500

Hand Irons
 80 percent or 800 now in use
 200 at average of \$7..... 1,400
Kitchen Appliances—
 Range
 3 percent or 30 in use
 970 at average of \$150..... 145,500
 Dish Washers
 5 percent or 50 in use
 950 at average of \$100..... 95,000
 Refrigerators
 5 percent or 50 in use
 950 at average of \$250..... 237,500



J. E. North

Kitchen Power Units
 5 percent or 50 in use
 950 at average of \$65..... 59,750
Miscellaneous Appliances—
 Vacuum Cleaners
 70 percent or 700 in use
 300 at average of \$60..... 18,000
 Sewing Machines
 10 percent or 100 in use
 900 at average of \$75..... 67,500
Small Appliances
 It is more than safe to assume that 50 percent of the homes are prospects for small appliances,
 500 Toasters
 500 Percolators
 500 Grills
 500 Chafing Dishes
 500 Waffle Irons
 500 Egg Boilers
 500 Radiant Heaters
 500 Heating Pads
 500 Hair Dryers
 500 Massage Vibrators and Violet Ray Machines
 500 Curling Irons
 500 Fans

Total 6000 at average of \$12 each.... 72,000
 Total\$1,223,650

While replacement of appliances will add to this total, the amount has been omitted to make sure that estimates are conservative.

Note from the above that to electrify one thousand homes will require an investment of an average of \$1,223.65 per home, and if we set out to electrify these homes during the next ten years it means that the average investment per year will be only \$122.36, or \$10.20 per month, \$2.35 per week.

According to government statistics, 46 percent of the families have an income in excess of \$4000 per year—even if the average did not exceed this amount the \$122.36 for electrical devices which promote health, economy and comfort is only a very small percentage of the total.

It isn't expected that a contractor dealer can set up any economical plan to sell 10 percent of the items listed in one year, but it is possible to set up a schedule to include all of the items listed so that the average results for each year will call for a total of \$120,000 or a gross of \$10,000 per month.

While the above calculations have to do with a total of one thousand home owners, it is not the thought that the contractor-dealer should not attempt to serve a greater number.

An estimate should be made by the contractor-dealer on the amount of gross sales for one year; based on his ability to properly finance the business, after the right kind of an organization has been created to handle the volume which he has set up as a bogey for one year.

After the business has been financed to provide for the necessary fixtures, equipment and merchandise, and to take care of time payment contracts without having to pay an excessive rate of interest, the next thing of great importance is the location from which the contractor dealer proposes to do business.

Canvassing Important

While much has been said about main street locations in the high rent districts it is a fact that but a very, very few of these stores could continue to exist if it were not for the outside salesmen. Hats and shoes have become necessities, the public go to these stores,

but all of the people have not been informed concerning the value of electrical equipment for the home up to the point where they will treat the electrical store as they do the hat or shoe store.

Since we must, for many years to come, continue to build up the desire for things electrical, then it would seem that electrical stores should be located so as to make it possible to serve the public in a way most satisfactory to the people and at the same time in a way which will decrease expenses such as rent, advertising, selling, delivery, demonstration, collecting and servicing to a minimum.

It is the writer's opinion that a dealer's store should be in the center of the community to be served rather than at a community center if it is not properly located in the community.

Let us consider the possibilities if dealer's store were located in the center of a community with a total area of approximately four square miles. It means that all of the homes in that community are within a circle only a trifle over two miles in diameter and that the maximum distance to any of the homes in the community is not over two miles from dealer's store. Think of the saving in time which means money when sales can be made, goods delivered, and every transaction handled with the customer just around the corner.

Greater Cleveland might be divided into about fifteen communities which include the most thickly populated sections of the city. In each of these residential communities there are approximately six thousand dwelling buildings housing from one to perhaps two hundred families. Each might be considered as a small city with a popula-

tion of from thirty to fifty thousand people.

It is safe to assume that at least half of these six thousand homes are owned by the people who live in them.

Home Owners as Prospects

We can for the moment forget about the renters who are temporary residents in a community and think about the three thousand home owners who are the best prospects for more wiring, lighting equipment and appliances.

According to the above estimates the three thousand homes present possibilities for the sale of (three times \$1,223,650) \$3,670,950 during the next ten years, and the contractor dealer who elects to serve a community of this size can set the mark for annual sales at any point up to \$367,095 per year and with the right kind of an organization expect to hit the mark at the end of the twelfth month.

Now that we have considered the available business in a community and the location of the place of business for the contractor-dealer, the next step is to consider the service to the home owners which will cause them to believe in the contractor dealer and think of him as a public benefit who is to be a part of the community not for a few months but from now on.

The contractor-dealer may establish himself and the permanency of his business in the minds of the home owners in his community by proposing to them a service which has been demonstrated that the public have been waiting for—A service which will guarantee the repair of electrical equipment and the replacement of burned out lamps, monthly inspection of equipment including

wiring, switches, fuses, portable lamps, appliances, etc., as well as messenger service like we now get from the corner drug store at a price which will prove to be of mutual benefit to the home owner and the contractor dealer.

In consideration of the possible sales resulting from this intimate contact with one, two or three thousand home owners, this service might be rendered for an amount as low as \$3 per year.

On one thousand contracts this could amount to\$3,000
Lamp Sales of the same amount..... 3,000
Plus the sale of materials and parts used in connection with repairs.

In order to replace burned out lamps and to provide for the replacement of parts on appliances that may need to be repaired a form should be provided on the back or made a part of the service agreement on which may be listed the lamp types and sizes for each room, also the make and approximate date of purchase of the appliances now in use. This record will not only enable the contractor-dealer to serve the home owner efficiently but will in addition furnish a most reliable prospect list and the contractor-dealer will know how to do advertising and selling at a minimum expense.

Records of present equipment and appliances may be made on forms as follows: (1) Showing the various appliances now in use, the make, operating condition, years of use, and if any wired furniture, in addition to other details relative to meter box, safety panel board, receptacles, switches, bell ringing transformer, exits; (2) Wiring details such as the number of outlets and switches and kind, type of ceiling fixture, number of empty sockets in the room, etc.

Dramatizing the Importance of Proper Lighting

Stage Manager Tells How He Would Stage a Lighting Sale as Reported in Interview by Thos. F. Chantler of Staff of The Society for Electrical Development

[NOTE: Not Infrequently constructive criticisms reach an industry from without, some from further afield than others. This time, however, the tip comes from fairly close to home. For there is much of the art of the actor in selling and much of the art of the salesman in acting. This tip from Stageland, therefore, invites the attention of all who engage in selling better lighting to shops, mills and factories.—The Editor.]

Recently your reporter visited a well known stage director to secure material for an article on stage lighting. The talk veered to the subject of selling

illumination and this man made a suggestion of real value to every man who solicits factory lighting business. It so happened that he just recently had spent several days in a factory in search of local color for use in a stage factory scene, at which time he witnessed the efforts at selling illumination which were responsible for his making this suggestion.

"Possibly that salesman's tactics were not typical; but," he said, "if that was a fair sample, well—there's room for

improvement for selling better illumination to such prospects. Lord, yes! Anyhow, it is a simple matter to dramatize a lighting sale and inject some punch into it. Beats me why it isn't done generally."

"What are your ideas?" I urged. "Readers of THE ELECTRAGIST are tremendously interested in new ways to sell lighting"

"All right," he agreed, "but be sure to keep me out of the picture. Far be it from me to presume to tell all or any

part of the great electrical industry how to conduct its business. However, here's my idea. Pass it along if you consider it worth while.

"First, get this picture of the man who was trying to sell lighting to the factory I visited. He was clean cut all right and doubtless a good salesman in the ordinary sense. But illumination if you please, is far from being an ordinary commodity. As I see it, special methods are needed to sell it. This chap had none—all old stuff—just talk.

Overcoming Shortcomings

"You see my own experience in getting authority to install an up to date lighting equipment in this theatre opened my eyes about how to sell lighting. It was like this: The old man thought the lighting was plenty good enough; the vision of a big bill of expense gave him a headache. You see he had lived with the old lighting so long he had become blind to its shortcomings. Those selfsame shortcomings were as obvious as limburger to me, for before I came here I had been with a house where the lighting was the last word."

"How did you finally sell him?" I asked.

"By doing what I should have done first off," he laughed. "I somehow found time to drag the old man around to see the lighting of our rival houses. They are all noted for their fine stage lighting. With that picture of good lighting planted in his mind it then was easy to bring him back here and make him see how far behind the times we were. Then it was easy sledding and soon I secured his permission to bring

the lighting in our house up to date; I went the limit, you bet."

"Fine!" I said. "But you can't reasonably demand of the average electragist that he drag his prospects all about town to inspect the lighting equipment in other factories."

"Of course not," he agreed promptly. "But just the same, Mr. Electragist, probably would agree that it would be great for business if he could do that. However, there is a much easier way. Now I have seen portable displays that enabled the salesman to bring out all the shortcomings of poor lighting in factories, shops, and so on. They are compact little affairs and one outfit I saw fitted into a suit case. Even a good salesman, it seems to me, would increase his efficiency fifty percent at least by making use of these things.

Importance of Light

"For instance, if I had been selling that lighting job at the factory where I was looking for atmosphere, I should have started out by proving to the manager how important light is to good vision, even when the eyes of the prospect are perfect. There is a small display, the basis of which is an optical chart and illumination of varying intensities that makes it easy to do that. Next, I should have made use of one of those little portable displays that consists of three little upright pillars, one round, one square and one triangular with the lighting arranged to play on them from different directions, with almost unbelievable changes in their appearance, according to the way the lighting is manipulated.

"Finally, I should have sold that prospect on the importance of proper coloring for walls and ceiling and earned his confidence by convincing him that I knew what I was talking about. There is a display that I have seen which is specially designed for that purpose too.

"You see, I used to be a salesman before I got into the theatrical game and it has surprised me to learn how much of what I thought applied only to selling is useful on the stage. On the other hand the stage has taught me a lot that I would use in selling if I should ever go into business again. For it is by appealing to the senses that points are made in the theatre, and that holds true of selling too.

"In other words, and to put my thought in a nutshell, here's what I am getting at. With a portable display such as I have suggested, the salesman would be able to give his prospects a picture of proper illumination—a standard of judgment making it easy for the prospect to recognize the shortcomings in the existing lighting equipment. The display equipment should be light enough so that the salesman can put it in his car, if necessary, and take it to the prospect's place of business. In fact, I think it might be a very good plan to take it to the prospect's place of business in every case. For then the contractor would have a good excuse for getting all the executives of the business together and selling them all at once.

"Anyway, that is the way I should dramatize my talk if I were selling lighting."

Conference of Leagues Was Well Attended

Electrical Men From All Branches of the Industry Were at the Association Island Gathering—Many Electragists There

Camp Coöperation III, the second gathering of representatives from electrical leagues throughout the United States and Canada, was held at Association Island, Henderson Harbor, N. Y., on September 16th to 19th, with more than one hundred and seventy five delegates attending. Almost every section of the country was represented and two delegates came from England.

The electragists were well represented, about twenty five members of the Association of Electragists being in attendance and taking an active part in all sessions of the conference. The accompanying illustration shows some of the electragists who attended.

From the opening of the camp on Sunday, September 16th, with the impressive ceremonies of flag raising at which the Stars and Stripes and the Canadian Union Jack were flown together over the Camp Coöperation emblem, to the closing session on Wednesday, the meetings were an earnest intensive interchange of ideas and experiences in league work.

The delegates were welcomed at the first meeting under the great elm by W. W. Freeman, president of the Society for Electrical Development, under whose auspices these league conferences are held. He pointed out that since last year's conference thirty new leagues

have been formed and thirty more are in formation.

J. Robert Crouse, whose influence throughout the conference was inspirational, stated in his opening address as the basis of league purposes that "through coöperation and collective action lies an avenue for greatly reducing the selling expense of the electrical industry."

The business sessions of the conference under the chairmanship of W. E. Robertson of Buffalo were spirited and almost every delegate took an active participation in the discussions and interchange of ideas. The program covered all phases of league work from the



No Conference at the Island Would be Complete Without an Opening Meeting Under the Spreading Boughs of the Old Elm

methods of formation through the various types of field activities and plans for selling the electrical idea to the public.

One of the ideas which was constantly expressed as fundamental if a league remained permanently effective in any community was the keeping constantly in mind that league activities should not be confused with the activities and needs of the specialized groups, and that both were needed in local programs for the development of the industry as a whole. The purpose of the league itself should be constantly kept in mind as being the development of new markets and the extensions of present ones for electrical consumption. Any activity which cannot be grouped under either of these headings is liable to lead to an overlapping into the field belonging to a separate group organization or to individual competitive effort.

One of the most valuable sessions of the conference was that presided over and entirely handled by women in the

industry. Miss Alice Carroll of the Society for Electrical Development acted as chairman, and the women's viewpoint as presented by the women who followed her as speakers was an important contribution to the convention.

Ideal weather continued throughout the convention and made possible the carrying out of a program of sports each afternoon which make the conferences

at Association Island one of the most enjoyable events in each year of get-together meetings of electrical men.

Chief interest Wednesday morning came in the discussion of the tie up of the local league activities with some national organization. Chairman Robertson appointed the following Resolutions Committee: Earl Whitehome, Electrical World, Chairman; J. E. North, Cleveland; J. S. Tritle, Westinghouse Company; Fred Rost, Newark, N. J.; Arthur G. Kimball, Landers, Frary & Clark. The Resolutions Committee reported as follows:

Whereas, Electric Leagues and Clubs have existed for some time in certain cities of this country and Canada, endeavoring to promote cooperation and harmony in the development of the local electrical market, and

Whereas, Recognizing the need for an interchange of ideas and experience between these Leagues and Clubs, The Society for Electrical Development last year invited representatives of these leagues and clubs to gather here on Association Island for a conference at Camp Cooperation II, September 5, 6 and 7, 1922; and

Whereas, At Camp Cooperation II a resolution was adopted urging the Society for Electrical Development to use its best efforts to direct the attention and secure the support of leading men in all branches of the industry in establishing these local leagues; and

Whereas, The number of local Electric Leagues and Clubs has materially increased in the past year and their activity and influence has been strengthened so that the need for con-



Everybody Was Out Bright and Early to Witness the Flag Raising, Always an Important Ceremony on Such an Occasion at the Island



Here's the Bunch—Pick Out Your Friends. All Celebrities of the Electrical Industry—and Some Who Weren't—Were in Attendance Formed in the Last Few Years Throughout the Country. This Conference



Electragists Made a Fine Showing and Here's a Group of Regular Ones, Including Two Honorary Members and the Ever Active Larry Davis

tact and cooperation between these existing and prospective leagues becomes even more apparent and important; and

Whereas, It has been the clearly expressed sense of this meeting that Camp Cooperation III has been of great practical interest and benefit to the leagues represented, and that some sort of a national direction should be given to the promotion and sustaining of an effective contact and coordination, as well as cooperation, between these local bodies of electrical men.

Therefore, be it Resolved:

First: That we congratulate The Society for Electrical Development on its foresight and ability in initiating and developing this movement for the promotion of local Electrical Leagues and express our appreciation of the untiring efforts which their organization has contributed to make possible the gratifying success of Camp Cooperation III; and

Second: That a committee be appointed by the chair to consider and as soon as expedient submit to the local Electrical Leagues in all cities and to The Society for Electrical Development, the Joint Committee for Business Development, the National Electric Light Association, The Electrical Manufacturers Council, the Association of Electragsists, the Electrical Supply Jobbers Association, the Lighting Fixture Manufacturers Council of America, the Association of Washing Machine Manufacturers, the Vacuum Cleaner Manufacturers Association, the Illuminating Glassware Guild and other associations and interests within the industry, a plan for league organization and development that will provide for an organized coordination and cooperation of national scope to the end that a constructive program may be evolved that may win the support of all branches of the electrical in-

dustry; and the following resolutions looking forward to Camp Cooperation IV:

Resolved, That another conference of local electric leagues to be known as Camp Cooperation IV, be held next year on Association Island in September at a convenient date before the closing of the Island; and

Resolved, That the Society for Electrical Development be requested to act in the interim for the leagues, to promote league activities throughout the country, and to make the necessary arrangements with the Association Island Corporation and other preparations to insure the success of Camp Cooperation IV next year.

The meeting then adjourned to meet at the call of the Society for Electrical Development, in pursuance of the objects of the resolution looking forward to Camp Cooperation IV.

Camp Cooperation III was a success. The interchange of ideas will put new life into every league represented. Many new leagues will be formed this coming year and each of the communities they serve will profit through the experience of the pioneers who have blazed the trail.

William H. Merrill Dead

Just before going to press news was received of the death of William H. Merrill. Mr. Merrill was secretary of the National Fire Protection Association from 1903 to 1909 and served as president from 1910 to 1912.

The New Code

By A. PENN DENTON

A. E. I. Committee Chairman Stresses Importance of Enforcement

The electrical industry now has the new and revised edition of the 1923 National Electrical Code. This revision of the Code will give the electrical industry, the Insurance and Inspection interests, who are guided by its rulings, probably the most complete and carefully prepared Engineering Standards used by any industry or line of business in America today. The work of preparing the revised edition has covered a period of three years, the last revision having been issued in the 1920 Code.

The placing in the hands of our electrical industry of this new and latest Code should call to the mind of every electrical man its vital importance to his particular branch of the industry. In its preparation during the three years' interval, there is represented a vast amount of time and effort spent by electrical and insurance men for which no compensation has been received. But their labor has been gladly given in the interest of improving an Engineering Standard which has guided the electrical industry throughout a period of almost 30 years and this Code has played a more prominent part in the development and building of our electrical industry during that period of time than any other single factor.

The members of the Electrical Committee of the National Fire Protection Association, who are responsible for this Code revision, are all busy men in their own lines of business, but they all have had the greatest faith in the National Electrical Code and for that reason were selected by their respective Associations—members of the National Fire Protection Association—to do this work.

I would therefore call the attention of every man within the electrical industry



at Camp Cooperation III Held on Association Island September 16 to 19 in Behalf of the Many Electrical Leagues Which Have Been Was Under the Auspices of the Society for Electrical Development

to the importance that our Code has played in our industry's affairs this past quarter of a century. I have yet to find a man who will not admit that the Code as the guide to the contractor, the manufacturer and the inspector during all of these years, was absolutely essential in the installation of all classes of electrical materials and construction work. We must admit, all of us, therefore that the National Electrical Code is so much a part of our electrical business, that if we were today to discard it and attempt to manufacture electrical materials or install them without it as our engineering standard, chaos would be the result.

It does seem to me therefore that today our industry as never before must face its relation to the National Electric Code and take active steps to aid and improve this Code and see that the new Code is rigidly and uniformly enforced. Let every man whose business or work comes in contact with the rules of this Code, study it carefully and thoroughly, to the end that he may criticize it constructively and do his part in complying with its requirements.

Now that we have our new and revised 1923 Code, the work of the Electrical Committee of the National Fire Protection Association is again planned for another revision of this Code, for probably two years in the future. This Electrical Committee has worked without the proper support from our industry; in fact such support as has been

given has been of a personal and individual nature, while because of the importance of the Code to the industry as a whole, there should rather be a concerted action on the part of the industry as a whole to uphold the standards of our Code and look into the future with the idea of improving it and through its enforcement improve the business of each branch of our industry.

The question therefore cannot help but be asked at this time by many men vitally interested in the Code, and who have had a part in the intimate work of making it and revising it, "what use will the electrical industry make of this new Code, and what part will it play in the National Electrical Code of the future?"

The time has arrived when this question must be satisfactorily answered and the industry's course planned for the future if the Code continues to maintain its position as our standard and guide in the manufacture and installation of electrical materials.

The insurance interests of this country have been the leaders in the preparation of our National Electrical Code from its inception. They have labored long and patiently and have made it their business to develop this wonderful engineering standard, which stands without a parallel in any other line of industry, in the effectiveness of its provisions and the enforcement of its rules by reason of the fact that it is a self imposed law or set of laws for the

guidance of our industry, it is much more effective than if set up as our standard by municipal, state or federal enactment.

The electrical contractors wish to take this opportunity of calling upon the industry as a whole for leadership in the future in Code affairs. The insurance interests will only too gladly welcome our leadership by which we will relieve them, partially at least, of those problems which are primarily our own, but with which they will gladly cooperate in working out.

Let every electrical man within our industry use his best efforts to further the cause of a better National Electrical Code in order that the future will not permit, under any circumstances, of any selfish interest either within or without our industry, doing anything to handicap or break down this Engineering Standard which has served us so long and so well.

This brief message therefore is an appeal from the electrical contractors to the industry as a whole for immediate and concerted action in the formation of an advisory council which will be representative of all branches of our industry and whose cooperation will coordinate all matters affecting the Code by joining hands with the National Fire Protection Association and the Underwriters Laboratories, in the splendid work that they have done and which has benefited our industry to so great an extent.

Live Up to High Standards in Electrical Work

Sales Manager of Prominent Manufacturer Tells How Insurgent Minority Has Destinies of Business in Own Hands and Gives Remedy

The electrical industry today is collectively and individually failing to bring reasonable financial returns to the manufacturers, jobbers, dealers and contractors because of the ignorance and weakness of a very small minority that succeed in the abnormal lowering of prices, with consequent lowering of standards of quality, service and general efficiency.

Contractors make unreasonably and unnecessarily low bids on construction work because of carelessness in estimating, lack of knowledge of overhead, fear of underbidding by a competitor or a desire to secure more than a reasonable share of the available business even though it puts too great a strain on their capital and weakens their borrowing

capacity at bank and also their credit standing.

Frequently, as a result, a high standard of construction work is abandoned, cheaper and inferior supplies are used, and such contractors get into financial difficulties and are classed as slow pay by the jobbers. The better class contractors are often forced by such conditions to fall into line and adopt the same methods in spite of the fact they know the ultimate result is ruinous and destructive.

There was some excuse for these conditions in the old days when there were no definite standards of cooperative associations for education, improvement and mutual protection such as exist today. But there are now many ways in

which to overcome the unsatisfactory conditions which prevail if the proper corrective measures are taken.

Credit Should be Refused

Credit men should refuse credit to contractors that are slow pay as a result of making bids too low, careless estimating, failure to install proper book-keeping systems and the lack of the principal qualifications necessary for the operation of a successful contracting business. Credit men can do a vitally necessary and constructive work if they will protect the better class contractors from the destructive competition of contractors that have no moral right to be in business.

The better class contractors have a

right and should emphatically insist, as a body, that the credit men give them the protection to which they are entitled. It is morally wrong for credit men to give slow pay contractors an opportunity to compete with contractors that are prompt pay and that have all of the necessary qualifications for conducting a profitable business along constructive lines.

Salesmen can also help to improve conditions for the contracting branch of the industry by soliciting orders from the better class contractors that are known to be prompt pay. These contractors have a moral right to ask all salesmen from whom they buy materials to discontinue soliciting business from slow pay contractors that do not maintain high standards and that do not have the proper qualifications for the operation of a successful contracting business.

There is a decided tendency on the part of electrical supply jobbers to buy on a price basis instead of a quality service basis. This policy is forcing many manufacturers to cheapen their product and lower their standards to meet an inferior class of competition. This is a condition which can be eliminated by a higher class of salesmanship and by concerted effort on the part of the better class jobbers.

Practically all jobbers are too quick to take advantage of cut prices or confidential price arrangements which they assume places them at an advantage over their brother jobbers. It is practically impossible for any jobber to enjoy a cut price for an appreciable length of time as a leak soon occurs and as a result the cut price is soon established as the standard price by all manufacturers.

Prices Become Too Low

This process is sometimes repeated until prices are established at an extremely low level representing no profit to the manufacturers and sometimes an actual loss. Those familiar with a number of prominent lines know this to be an actual fact. What good reason has any jobber for fostering a condition of this kind? The writer does not believe in the maintenance of prices which mean an abnormal profit but all branches of any industry will suffer and deteriorate if destructive price competition is carried too far.

All jobbers of course desire to buy at prices which are as low as those enjoyed by other jobbers, but taking advantage of a cut price offered by a weak

kneed salesman does not give any jobber an advantage over the other jobbers because practically all manufacturers in any line will immediately meet such cut prices and all jobbers are again immediately on the same price basis.

But what has happened in the meantime? The material in every jobber's stock and the material of every manufacturer is immediately depreciated to the extent of the cut price offered and accepted by one or more jobbers. Manufacturers that permit their salesmen to cut prices without provocation or without good economic reasons are a detriment to the industry and should be discouraged by every jobber that has the good of the industry at heart. Any manufacturer that makes cut prices without provocation or without good economic reasons either has an inferior product, or an inferior, insipid sales organization.

The jobbers as a whole should have a greater regard for each other and should discourage the practice of price cutting by salesmen that cannot get orders in any other way. A jobber that accepts a cut price not only depreciates the value of his own stock but also depreciates the value of all material carried in stock by all other jobbers throughout the country. This is decidedly not coöperation or in accordance with the ethics adopted by the jobbers.

On the surface it is fine business for the jobber that accepts the cut price and encourages the price cutting salesman, but economically and ultimately it is destructive in result. Can any jobber fail to understand this or fail to apply the remedy?

Manufacturer Important Factor

Manufacturers can also do much to overcome these unsatisfactory conditions by constructive coöperation and educational propaganda. There is a tendency at times to freeze out the new manufacturers that are constantly entering into the field. As a rule a newly organized manufacturing concern will sell under market prices but even so such manufacturers cannot secure more than a small share of the available business.

When the older manufacturers meet the lower prices of the newly organized manufacturers the condition is not corrected because the latter will invariably make still lower prices. The older manufacturers should realize that there is room for all and business enough for all

if a concerted educational program is fostered to promote more complete electrical installations. The contractors must be educated to do better work and more complete work.

The majority of wiring installations are incomplete and the majority of the contractors seem inclined to skin the jobs rather than persuade architects and owners of the advantages of complete and elaborate wiring installations. If every wiring installation were complete, practically all factories would have to work double turn to keep up with the demand for material.

A considerable number of manufacturers are also afflicted with weak kneed salesmen and if such salesmen were promptly eliminated from the industry great good would result. Too many salesmen are prone to accuse other manufacturers of cutting prices because orders are not handed to them on silver platters. There should be a great degree of confidence between manufacturers, and the reports of salesmen should be discounted when they continually offer the story of cut prices as an excuse for failure to secure orders.

Electragist Backbone of Industry

The contractor is the backbone of the electrical industry and all branches should coöperate in the work of encouraging the better class contractors to do good work at a reasonable profit and to discourage the contractors that are not progressive and that are intentionally or unintentionally instrumental in lowering standards of construction and standards of quality of wiring materials.

Reasonable profits for all branches of the industry make it possible to maintain high standards of material, service and construction. Manufacturers are particularly enabled to conduct researches, gather statistics, promote electrical shows and displays, institute educational campaigns and in many other ways help to create more business for all branches of the industry.

Manufacturers, jobbers, dealers and contractors—electragists—should join in a campaign for higher standards and reasonable profits. The ultimate consumers will be benefited in the long run and will be more satisfied provided they get good value for their money.

The Go Getter says business is on the hum. The Goat Getter says business is on the bum. Wouldn't that butt you? asks somebody from the Oklahoma Gas and Electric Company.

Building Holiday Business Early

BY NORMAN G. MEADE

These Suggestions to Electragists Made by a Practical Man Will Boost Sales During the Gift Giving Time

For a number of years the writer's work has taken him through the eastern half of the United States, and having at one time been in the electrical contracting and supply business, the establishments of electrical contractors and dealers were naturally of much interest and many were visited. Where some unusual sales methods were used a note was made in a little pocket notebook, and the following ideas set forth some of them. They may not be new to some readers but undoubtedly will be interesting to all.

One outstanding fact seemed to be everywhere present. The majority of electrical dealers do not instill the intensive merchandising methods into their business that merchants in other lines do. In all probability this condition arises from the fact that so many electrical supply stores are the outgrowth of the contracting business and are therefore run by men whose experience has not been along merchandising lines.

We have talked with many commercial managers of lighting companies who invariably say that they would be glad to discontinue the appliance business if there were enough live dealers to push the current consuming devices as they should be pushed. This is not intended as an arraignment against the profession but the suggestions are offered in the hope that some of the ideas will be of benefit. At the time we were conducting a contracting and supply business, most of our effort was taken up in chasing contract work, estimating and supervising construction work; therefore the supply end of the business was left to its natural development which can be recorded as a lost opportunity and one which might have developed into a business that would have been truly worthwhile. But that was in days gone by and some other fellow is reaping the harvest now.

Remembering the Children

One dealer makes it a practice to record the births in the city and each year before a child's birthday he sends a letter to the parents with his best wishes. When the child is young, he suggests the use of milk warmers, heating pads, etc.

Later, electric toys, radio sets, and the like are suggested as presents. This has not only resulted in many sales but has served to keep the dealer before the parents in a novel manner.

One contractor-dealer was full of unique ideas and had equipped a number of private and public garages with various devices for opening the doors automatically. He also did a good deal of garage lighting and specialized in work of that kind. He watched the building permits and the dealers also gave him names of purchasers of cars. He then followed up the car owners and made quite a large business out of this one line of work.

A southern electrical dealer has in his employ a young woman who is familiar with the personnel of the society set so that when a reception, a wedding or other function is on the social calendar, she knows about who the guests will be. She watches the society news in the local papers, and if for example there is a wedding announcement, she will make out a list of those who will probably be invited and letters are sent to them calling attention to the desirability of buying electrical appliances for wedding gifts.

Mailing Lists From Newspapers

One dealer who draws considerable business from a radius of twenty miles in a thickly populated rural section supplied with electric service, watches the city newspapers and eight country newspapers published on that territory for personals. If Mrs. J. C. Horton of Elgrige is visiting Mrs. Thomas of Throopville, the names go into the mailing list. All ruralites mentioned in the city papers as being in the city on business, receive attention and their names are also placed on the list. This practice has been carried on for a number of years and a comprehensive mailing list of prominent people in the surrounding country has been built up. The people are circularized and receive personal letters calling attention to special offers in the way of electrical appliances.

A western dealer has made it a practice to arrange with the various real estate dealers in the city to obtain copies

of renting lists and lists of property for sale. These lists are kept for the convenience of the public and the dealer advertises that anyone wanting to rent or buy can find desirable opportunities by calling at his store. If a person finds several places listed that are of interest, he or she is referred to the real estate agencies for further information. This dealer made it plain to the real estate men that he did not expect or want a commission. Every person calling was, however, asked to leave his or her name and address and this was followed up. Persons moving and buying property are live prospects for electrical appliances and luminaire.

Selling Your Salesmen

One dealer found that some of his appliances were not moving as fast as they should and after an analysis of his business decided that the salesmen were not sold on the particular items in question and consequently did not make their best sales effort. The advertising carried in the local newspapers was considered good and sufficient space had been used.

The dealer changed his tactics and had the salesmen give a half hour early on two mornings a week to a demonstration of the appliances by himself. Electric ranges were the slowest to move, so the greatest effort was directed at them. The dealer went over all details carefully calling attention to every feature and invited criticisms and questions.

He advised his salesmen to read up on cookery so that they could tell the prospective customer the time and temperature required to do oven cooking or baking, and make other suggestions that would naturally interest and hold the attention of the housewife.

After a month there was a marked difference in the sales and the salesmen became enthusiastic. Now the motto of the dealer is: "Sell your salesmen first and the sales will take care of themselves."

There is no doubt that originality in window displays is a great advertising asset. That is what an Arkansas dealer thought, so at the time he was pushing the sale of a particular electric iron he hit on a novel window trim. He placed

a tank in the window about six inches deep, the size of the window, and filled it with water. He then procured four turtles whose shells were about six inches in diameter and painted on their backs respectively I-R-O-N, one letter on each turtle. He then advertised the display liberally and offered an electric iron to any person who could catch the turtles lined up so that the letters on their backs spelled IRON.

Another dealer who was featuring vacuum cleaners, offered one dollar for an old broom to every purchaser of a cleaner. These brooms were placed in the show window and a card above them read: "These brooms are worn to a frazzle but you should have seen the women who used them. They now have a Blank Cleaner and are happy and well once more."

The Customer is Always Right

There is no doubt that many dealers have made enemies by being too obdurate about exchanging imperfect goods. One dealer made up his mind that the only policy to follow was that the customer is always right. In one instance a lady brought in an electric iron that she had bought at another store sometime previously and claimed that it did not give satisfaction.

The dealer knew that the woman was mistaken as he did not handle that iron, but he also believed her sincere in thinking that she had purchased it there. She was well dressed and intelligent, so the dealer said: "Very well madam I shall be pleased to give you another and a better iron in exchange for the old one." The lady seemed pleased and said she was thinking of buying a washing machine. The dealer showed her his line and before she had left she bought a machine:

"Now," said the dealer, "if I had tried to argue with that woman she would have been mad and left and would have been sore on us always. On the strength of exchanging the iron, I sold her a \$125 washing machine." That incident proved to the dealer's satisfaction that his policy was right and he has conscientiously carried out this policy since with excellent results.

Demonstrating Washing Machines

One dealer, not satisfied with the time worn methods of demonstrating washing machines, decided to do something out of the ordinary, so he hit on a novel plan. He hired a large five ton motor truck and fitted it up as a modern

laundry, with the coöperation of the local lighting company. He equipped the truck with an electric water heater, a washing machine and an electric ironer, and decorated it with banners advertising the washing machine and his firm.

He then advertised that he would do washings and ironings free of charge during the next week. He placed the truck on a prominent corner and the lighting company made connections. A hose was run to a water faucet outside of the store at that point for the water supply. Washings from all parts of the city were brought to the truck, which was in charge of a salesman with a negress and the chauffeur as helpers.

The salesman was a good talker and explained to the onlookers the merits of the washing machine and gave out literature to the throngs of people who crowded about the truck all through the week. A laborer came along and stopped. He took off his dirty overalls and handed them up to be washed. Presto! In a short time the laborer was handed his overalls washed and ironed much to the amusement of the crowd.

The dealer said of course he could not say definitely just how many machines were sold through this demonstration but the sales increased largely and with apparently no other reason.

The proprietor of an electric shop made up his mind that he was not selling as many vacuum cleaners as he should and decided to try some original stunts. It was spring housecleaning time so he sent a crew of salesmen out with instructions not to say a word

about selling the cleaner at first, but go to the homes and offer to assist in the cleaning.

Boosting Vacuum Cleaners

The salesmen were equipped with all of the attachments and where they found a house torn up they would go ahead and clean mattresses, bureau drawers, wardrobes, and inaccessible places. Of course the housekeepers were watching with interest.

In many cases the salesman would clean the rugs. After he was through he would give a short talk and take the name and address of the people called upon and make any notes of interest. Personal letters followed and later a second call was made. The town was covered in this manner, and many cleaners and attachments were sold.

To create publicity the dealer put a sign over his light motor truck and a demonstrator with a machine would drive up to a store and ask permission to clean the walk in such places. This was generally readily granted so he would connect up with a long cord and run the cleaner over the sidewalk. If autos were parked in or near the store he would put an attachment on the cleaner and clean the top and the upholstery of the machine. Of course there were plenty of onlookers and the salesman would take occasion to pass around folders to the bystanders describing the cleaner and also leave literature in the parked cars.

Giving Away Theater Tickets

A large dealer who was located near a popular theater conceived an idea to



Courtesy N. Y. Edison Co.

**Passersby Never Fail to Stop Long Enough to Witness a Washer Demonstration.
Displays With Life in Them Count Most**

bring more people into his store during the week he was holding a sale. The theater was devoted to a stock company of high standing and was patronized by a desirable class of people. The week before the sale, the dealer went into the theater and inquired how much it would cost for the entire house for one night.

He was told after some figuring that it would amount to something over five hundred dollars. He took the entire house for the Saturday night of the week of the sale and paid for the tickets telling the astonished ticket seller to send every person wanting to buy a ticket for that night to see him.

He then had some postal cards printed with blank spaces to fill in which would indicate what appliances the recipient had and what was desired. With a promise that the cards would be filled in and sent back, the person was given the theater tickets gratis. People came in all during the week looking for Saturday night seats and swelled the crowd attending the sale and it got desirable customers into the store who would probably not have come in otherwise.

The gift of the tickets pleased the people who gladly filled in the cards and mailed them to the dealer. These replies were then followed up with letters and personal solicitation. The dealer was careful not to mention that he was giving the tickets away until the person had selected the seats he wanted or those which were available. A large amount of good publicity and many sales resulted from this experiment.

Creating Goodwill

In central New York City a dealer hit upon a plan to create a large amount of goodwill and at the same time accumulate a vast amount of information. He divided the city into districts and placed a salesman in each district. These salesmen were competent to make repairs of a minor nature.

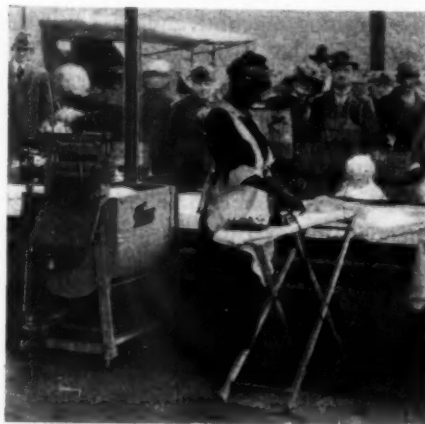
A list of consumers was secured from the central station company, and equipped with the names of the consumers in his district the salesman began a house to house canvass. He would ring the bell and say: "Mrs. Smith I represent the Quality Electric Shop and thought that I would stop to see if your electric appliances were giving satisfaction."

"Why," said Mrs. Smith, "I didn't buy anything from you, I bought my appliances from Browns."

"That doesn't make any difference," replied the salesman, "if there are any minor repairs or adjustments to make I should be glad to make them and it won't cost you a cent."

Of course this was a novel idea that made good. If the salesman made an inspection of the lighting and appliances, which he generally did, he would talk casually about the advantage of other appliances which did not form part of the household equipment. He made note of the appliances and lighting fixtures and after doing any necessary work would say: "I am glad to be of service to you and should like to have you call at the store."

The dealer would follow up the calls



Courtesy N. Y. Edison Co.

Make Your Window Trims Novel. A Person Using an Appliance Always Attracts Attention

with letters, and later the salesmen would again cover the territory. A card index was kept, made up from the salesmen's reports, and in that way the dealer knew just about what every current customer in the city had, what satisfaction the appliances were giving, and the probability of selling more appliances or lighting fixtures.

That was not all—he created a goodwill that was lasting and the word of mouth advertising was better than the space he carried in the local newspapers.

Boosting Lamp Sales

In a New England city a dealer had the agency for an independent lamp, and of course did not get the benefit of the national advertising carried on by the large lamp corporations. He had a good lamp and he knew it, and furthermore it could compete in price. The problem was how to boost the sales. This is what he did: He first went into a drygoods store and asked for the proprietor. It was a large store and used a lot of lamps. "Mr. Jones," said

the lamp man addressing the proprietor "for twenty-five cents I will double your show window lighting."

"Oh you can't pull that gag on me," returned the jeweler, "I've had all of the experience with your sort that I want and I have no time to talk."

"I'll tell you what I'll do," said the lamp man, "It won't take any of your time and I'll put up the twenty-five cents if you will allow me to get into those windows and show what I can do."

The merchant was taken off his guard by this offer and grudgingly gave his consent. So a few nights later the lamp man with his twenty-five cents invested in soap and metal polish got into the window and took down all of the shades and lamps and polished and washed them. The next night the merchant inspected the windows and accused the lamp man of putting in larger lamps.

He convinced the merchant that he had not done so and the latter was so impressed that he gave the lamp man permission to go over the whole store and change what lamps he considered necessary. This was done and not only was the current consumption decreased but the lighting was greatly improved and the merchant became a regular customer. This practice was carried on throughout the city and a very large lamp business was worked up.

One Cause of Bankruptcy

Where one firm may go to the wall because of dishonesty, many fail and go through bankruptcy because of inefficient stock keeping, says the writer of the *Lightolier Bulletin*. A concern usually falls down in keeping track of merchandise and materials. The average business man would never dream of throwing dollar bills out of the window, but he will stand by without batting an eyelash while old stock eats up hundreds of dollars in interest and depreciation, and while valuable customers' good will is lost because needed merchandise can not be supplied.

The small store is a particular offender, continues this writer. Here the proprietor's first ambition is to install a cashier with a mahogany cash register or a bank teller's cage. What he ought to get is someone to watch his stock and see that he is protected against accumulation, depreciation and shortage. A cashier may be a luxury, but a merchandise clerk is a necessity. Big leaks are not in the cash drawer, but on the shelves.

Profitable Activities of an Electric League

By J. E. BULLARD

How the Secretary Through Mail Contact and the Holding of Meetings With Architects Can Directly Promote Business

The primary function of an electric league is to develop the market for the electragerist. For this reason if the league is to serve its true purpose field work must be done. The problem is to find a way of doing this effectively and at the least cost. The method now being used by the Rhode Island Electrical League promises to go a long way towards solving this problem.

Each week the secretary receives reports on all building permits issued. These he divides into three classifications: residence, commercial and industrial, and alternations. Immediately letters are mailed to those directly interested in the buildings.

In the case of residences the letter features the popularity of labor saving appliances and points out the advisability of providing adequate and correct wiring for these appliances while the house is being built. Good lighting is also stressed and for both the appliances and the lighting the need of convenience outlets is made apparent.

These letters are really educational in character, rather than straight sales letters. They serve to give the people who receive them much of the information that would be given them if a field man called in person. They make it possible to reach the person who is building a new residence quicker than that person could be reached by a field man, for it matters not how many permits may be issued in one day a letter reaches each applicant for a permit the next day.

The first letter is followed up with a second one placing more emphasis on the points featured in the first. With these letters there is enclosed a return card, and to get the people to use this return card a booklet on electric wiring and electricity in the home is offered for its return.

To the second class, the commercial and industrial buildings, the letters point out the very great importance of giving sufficient attention to the proper lighting and to providing adequate capacities in the wiring to supply current to all lighting and small electrical appliances that will be used on the circuits. Convenient control, the proper

location of switches and the like is also given attention.

Advocating Convenience Outlets

In the commercial and industrial plants, special localized lighting, the use of small motors in offices and stores for such purposes as cash register operation, adding machines, multigraphs, and other store and office appliances, the use of fans, small heating appliances and the like require an abundance of convenience outlets if the regular lighting system is to remain intact. A survey of the wiring in the stores, offices, and factories shows that in most cases the wiring installation is not adequate for the purposes for which it is used. In the factory where it is all open work, additions to the system are not so difficult but in the office and the store where the wiring is concealed, changes and additions are made at considerable expense, and the final appearance is not always all that could be wished.

The object of these letters is to point out these facts to the people who are building and to offer the services of the league in working out plans that will prove more adequate than those which have been used in the past.

In the case of alterations, much the same points already mentioned are brought out in the letters but special stress is placed on the fact that while alterations are being made, is the time to bring the wiring installation up-to-date. This is the time to modernize the lighting and to install the convenience outlets and the switches that are needed to make the installation most effective in serving its purpose.

A feature about this plan is that it renders the same service to the contractor specializing on the large installations in the commercial and the industrial field that is rendered to the man specializing on residential work. Very often it happens that the men who are in a position to render the greatest service to the league are those who have made the success of their business that enables them to devote all their attention to the larger contracts. It can hardly be expected, however, that these men are going to give much of their time and money to the support of the league un-

less something tangible is done by the league to aid them in their business.

At the same time the small contractor is not going to take a very lively interest unless something is also done to help him get more business. It is a case of rendering impartial service to all the members of the organization.

When the league is young and when the income is limited it is not an easy matter to render this service. Electrical homes are an excellent means of arousing greater public interest in residential wiring and the uses of electricity. However, these homes lose much of their value if they are not followed up by some kind of field work.

Mail Contact is Helpful

If the league devotes all its attention to electrical homes, then it is almost certain that many concerns whose support is most needed will lose interest in the league. It is for reasons such as these that the plan of making letters do as much field work as possible has been adopted. Through letters mailed to all persons and concerns given building permits and the following up of these letters with other mail matter and personal consultations wherever conditions appear to require these personal consultations, the way is prepared for the individual members to increase the size of the individual contracts.

This work can be done much more effectively by the league than it can by the individual members, because the league having nothing to sell but the idea of better wiring, a better installation, and a more convenient use of electrical appliances, not only can concentrate on this idea but the information given by the league is much more certain to be taken at its face value and not be discounted. People realize that the object is really educational rather than the securing of individual contracts. With the educational work done the contractor can devote more of his attention to the securing of the contract itself. It is not necessary to devote so much attention to educating the prospect, which may prove rather expensive work on the part of the individual concern.

The cheapest and at the same time one of the most effective ways of con-

ducting this work is proving to be a liberal use of the mails. However, the work does not stop here. One meeting has already been held with the architects and it is planned to have just as many architects as possible attend future regular meetings of the league.

A very promising method of getting these architects to attend these league meetings is to arrange to have the individual members of the league invite the architects to attend the meetings as their guests. In this way the members themselves can do a lot of worthwhile personal work with the architects. The closer then the league works with the architects the more effective will be all the field work.

Meetings arranged exclusively for the architects serve as very effective field work. In these meetings the architects are free to enter into a discussion without restraint and much valuable information is thus brought out. Therefore it seems a good plan to hold meetings with no reporters of any kind present and with no members of the league aside from the secretary and possibly a few of the officers present.

The larger the number of people not connected with the architectural profession present, and the wider the publicity given to the meeting, the greater the restraint which is going to be placed upon those present. If the meetings are held strictly for the architects, outsiders are excluded, and no publicity given to them, then anyone present may feel free to say things he would not otherwise say. This makes it possible to render more real service to those present.

The plan of conducting electrical homes, special meetings for the architects, and encouraging the architects to attend the meetings of the league as guests, together with following up all permits with letters and other direct mail matter, means impartial service to all members of the league and promises much for the future.

Electricity in Yucatan

Cities Have Lights and Appliances But Towns Go Without

The more important cities and towns of the Progreso, Mexico, Consular District have electric plants, principally for the furnishing of light, and incidentally for providing power to small industrial enterprises, according to a report to the U. S. commerce department from Consul O. G. Marsh, Progreso. Each plant is confined in its operations to its own immediate city or

town. The complete absence of water power, the high cost of fuel—charcoal, wood, and crude oil—the great area of the individual hemp plantations, and the distances between cities and towns have limited, and will continue to limit, the electrical development of this district.

The most important electric plant of the district is in the city of Merida, the capital and largest city of the state of Yucatan. Merida has a population of about 65,000, and is the principal market for electrical supplies. This plant, which has a capacity of about 2,000 kilowatts, supplying both direct and alternating current, furnishes light for the city streets and about 5,000 houses, power for about 300 electric motors, and current for other operations of a minor character.

The plant in Progreso, which has a population of about 11,000 and which is the seaport and second city of Yucatan, has a capacity of about 300 kilowatts, direct current, and supplies about 500 customers.

The port of Campeche has a plant of about 200 kilowatt capacity; the town of Motul, a plant of about 70 kilowatts; and other smaller towns have plants of varied capacities. There are perhaps ten individual plants in operation in homes and on plantations.

Most of the houses are of stone and therefore fireproof. Surface wiring prevails, twisted lamp cord and porcelain knobs being used.

The electrical supplies in common use and demand are rather simple in character, the many modern articles of convenience not having changed the old

established customs of the population. The following in order of estimated volume of sales, there being no statistics available, are in most demand: Lamp bulbs, motors of various kinds, lamp cords, fans, sockets, and meters. It is estimated that the following are in use in Merida: Electric washers, one; electric flat irons, 150; electric motors, 300; electric sewing machines, 12; electric pumps, 50. The motors are used in cordage factories, a brewery, a flour mill, moving picture houses, corn mills, and other small industries.

Electricity Cost Down

While the cost of living is far above what it was ten years ago, the cost of electricity is lower, according to the United States Bureau of Labor's last quarterly report on living costs.

The latest report separates the item of electricity from fuel and light, in which it has formerly been included. In the statistics just issued, which include the figures for March, 1923, the cost of electricity shows a reduction of 2.4 percent compared with the last quarter of the year 1914.

Other items of expenditure which enter into the cost of living show large increases during the same period. Fuel and light combined show an increase of 86.2 percent; food, 42 percent; clothing 74.4 percent; housing, 62.4 percent; furniture, 117.4 percent; and miscellaneous items, 100.3 percent.

Electricity not only shows a decrease, but has shown but one increase in the last six years—one of 1.2 percent in December, 1920.



Here's a Way to Tie in the Celebration of a Special Event With a Good Fall Display—
A Weekly Window of the Louis D. Rubin Electric Co. of Charleston

How to Light Laundries

By A. D. BELL

Edison Lamp Works Expert Discusses the Units and Intensities Desirable for Use in Such Installations

[NOTE: To the electrageist who has a lighting installation for a laundry under consideration, or who wishes to inform himself as to the most modern practice in this field, this article by Mr. Bell will give some very practical information. The material for it was largely obtained as a result of an investigation of the lighting of laundries of New York City, conducted under the auspices of the Laundry Board of Trade of Greater New York.—The Editor.]

In a large percentage of cases the lighting of landries falls considerably behind present day standards, although it frequently is the case that sufficient current is consumed to give excellent results. A miscellaneous arrangement of lamps with and without reflectors, accompanied by glare, objectionable shadows, and a generally gloomy appearance, is characteristic of the lighting systems of too many such places. To get the full benefits of a lighting system it is necessary that the lamps and reflectors be definitely spaced and hung.

Bowl enameled lamps with R. L. M. Standard Dome Reflectors will give the cheapest and best illumination for nearly all sections of the laundry, and are employed in the majority of cases.

For those operations which involve inspection, however, such as at the shaking table, ironers and folding tables, it

has been found desirable to use Mazda C daylight lamps. Dirt spots, stains, scorchers, etc., will appear under this light nearly the same as under actual



Every Electrageist Should Appreciate the Value of a Foot Candle Meter

daylight, and consequently may be quickly detected.

When these lamps are used, another type of reflector is recommended—the Glassteel Diffuser. This is similar in shape to the R. L. M., but has a glass globe fastened in the bottom so as to cover the lamp. This glass globe acts as a diffusing medium and in this way eliminates the glare. A small portion of the light is emitted upward through glass covered slots in the top, and the relative efficiency of the unit is about the same as the R. L. M. Standard Dome with a bowl enameled lamp.

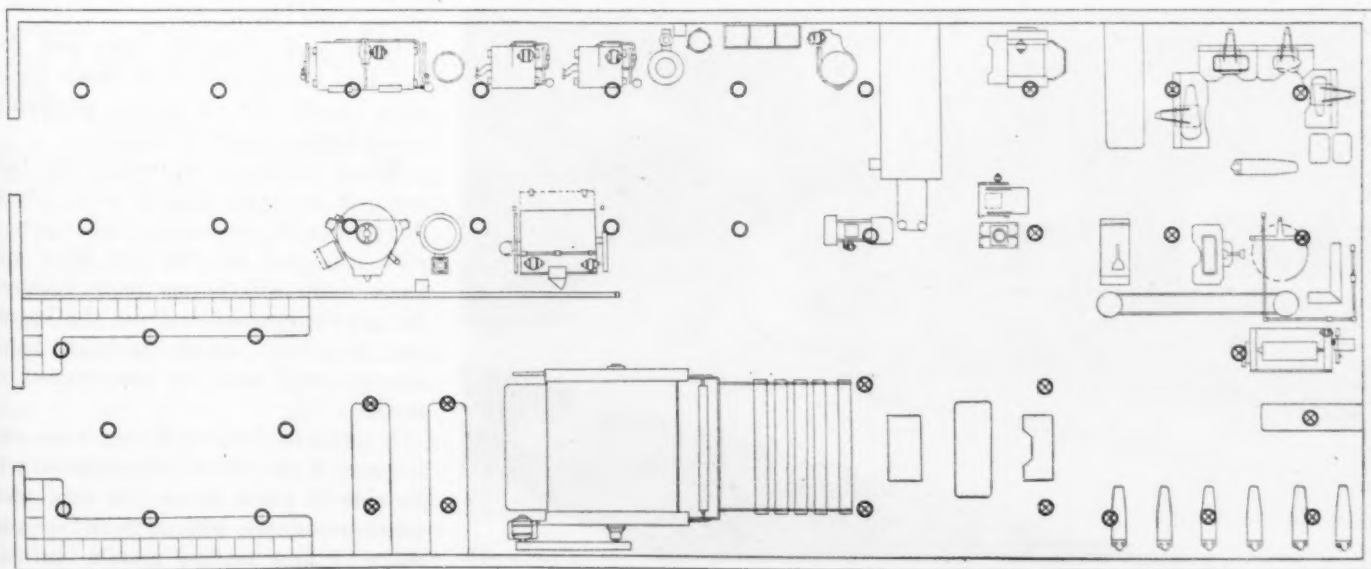
Knowing what equipment should be used, it is necessary to be acquainted with the lighting requirements of the laundry. Ironing for instance needs a much higher intensity than washing. Having determined by the use of a foot candle meter what intensities are necessary from actual practice, it is possible by means of certain calculations to specify just what sizes of lamps and reflectors are needed.

The different laundry processes will be considered in order and their respective requirements discussed.

Receiving and Sorting

This work requires a fair degree of intensity of illumination so that the different markings may be easily distinguished. Bowl enameled 100-watt Mazda C lamps R. L. M. Standard Dome Reflectors, spaced on centers from 10 to 12 feet, will be satisfactory; or in other words, an intensity of from four to six foot candles is desirable.

The wash room is too often a gloomy looking place. A high intensity of illumination is not necessary, but approximately a four foot candle intensity is recommended. The washing machines are generally arranged in rows, and the lighting units should be laid out in rows directly over them. R. L. M. Standard Dome Reflectors and 100-watt bowl enameled Mazda C lamps, hung



LIGHTING LAYOUT OF A MODERN LAUNDRY

- 100 watt bowl enameled Mazda C lamps in R.L.M. Standard Dome Reflectors
- ⊗ 150 watt Mazda C Daylight lamps in Glassteel Diffusers

10 feet high and spaced 10 feet apart, will give excellent results. Plenty of light will reach the interior of the machines providing illumination for cleaning or repairs.

Extracting and drying operations require lighting of the same order as that needed for washing, hence the recommendations just given will hold good here.

A fairly high intensity of illumination—from six to eight foot candles—is needed for the shaking tables. Mazda C 150-watt Daylight lamps in Glassteel Diffuser Reflectors, spaced on 8-foot centers arranged in rows over the tables and hung nine feet high, should be used. By this light any stains or spots will be easily detected.

Ironing Light

Flat iron work ironers generally require low lighting units at both the feed and delivery ends. These units should consist of Glassteel Diffuser Reflectors and 150-watt Mazda C Daylight lamps, which should be spaced approximately five feet apart and hung about six feet high, within the ventilating hood if possible. With this arrangement the operators will have sufficient light on the work, and the area in the immediate vicinity also will be well illuminated.

Hand ironing may be performed on regular ironing boards or with special machines such as garment pressers, etc. If this work is carried on in one section, general illumination will be satisfactory, using Mazda C Daylight lamps and Glassteel Diffusers. For general illumination, 200-watt units on 10 to 12 foot centers and hung approxi-

mately 12 feet high will be satisfactory. If the work is scattered about, one 100-watt lighting unit for each ironer should be provided.

It is at the folding table where the flat work received its final inspection. Light of a daylight quality may be used there to good advantage in order that any scorches, stains or spots may be discovered before the goods are sent out. Mazda C 150-watt Daylight lamps in Glassteel Diffusers, hung about nine feet high and spaced approximately eight feet apart over the tables, should be used.

Sorting and Wrapping

Both of these operations have to be performed with care, and an intensity of from five to seven foot candles is desirable. If the procedure is such that the goods are inspected at this time, Mazda C Daylight in Glassteel Diffusers should be used. Either 150-watt units on 8-foot centers or 200-watt units on 10-foot centers will be satisfactory.

Such operations as starching collar and shirt work, curtain washing, etc., require illumination which is not materially different from the systems already described. Where color discrimination is necessary Mazda C Daylight lamps in Glassteel Diffusers should be used; otherwise bowl enameled Mazda C lamps in R. L. M. Standard Dome Reflectors. In all cases the units should be so spaced and hung that a sufficiently high intensity is provided where needed.

The lamps and reflectors should be cleaned at regular intervals in order to get the maximum of efficiency from them. Blackened or burned out lamps

should be promptly renewed, and only lamps of the same voltage as the circuit used.

Color of Walls and Ceilings

Light colors for the walls and ceilings are preferable, not only because they afford greater light utilization, but because they give the laundry a much brighter and more cheerful appearance.

Failure in Business

In an editorial in the *Golden Rule* magazine Napoleon Hill said that, if you once get a good grip on this philosophy that every failure is a blessing in disguise it will go a long way toward helping you find that wonderful string of pearls called happiness.

Failure is nature's plan of hurdle-jumping a person and training him for a worthwhile work in life. It is nature's great crucible and tempering process which burns the dross from all the other human qualities and purifies the metal so it will withstand all hard usage throughout life.

Failure is the great law of resistance which makes a person stronger in proportion to the extent that he overcomes this resistance.

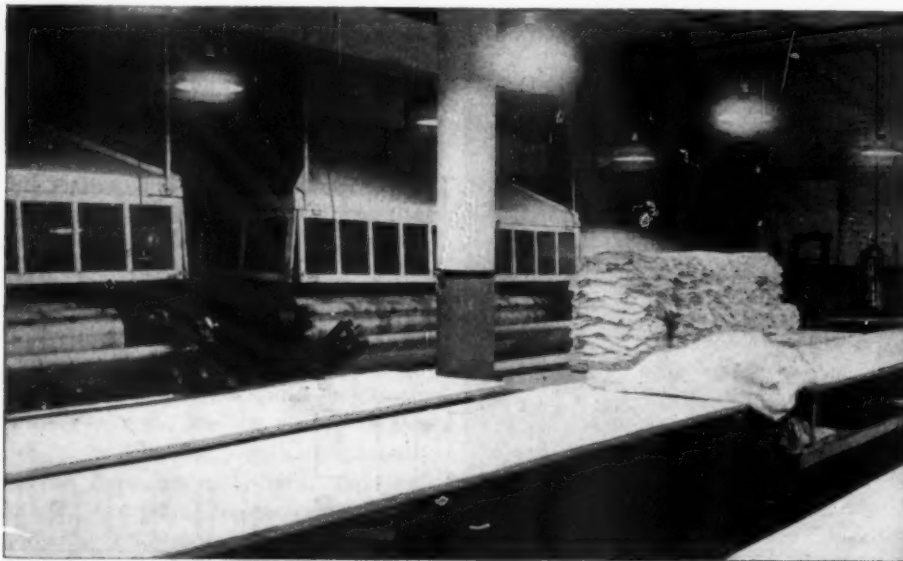
In every failure this is a great and lasting lesson if one will only analyze, think and profit by it. Failure develops tolerance, sympathy and kindness in the human heart.

You will not travel very far down life's pathway before you discover that every adversity and every failure is a blessing in disguise; a blessing because it has put your mind and your body into action and thereby caused both to grow through the law of use.

Look back down the ages and you will find history full of incidents which show clearly the cleansing, purifying, strengthening value of failure.

When you begin to realize that failure is a necessary part of one's education you will no longer look upon it with fear, and lo! the first thing you know there will be no more failures. No person ever arose from the knock-out blow of defeat without being stronger and wiser in one respect or another.

If you will look back over your own failures, if you are fortunate enough to be able to point to any of very great consequence, you will no doubt see that those failures marked certain turning points in your life and in your plans which were of benefit to you.



Since a High Intensity of Light is Required for Ironing, a Foot Candle Meter Always Should be Used Here to Determine the Proper Needs

Twenty-third Annual Convention of the A. E. I. Expected to be Greatest Ever Held

Final Arrangements Should Be Made at Once to Attend This Biggest of All Contractor-Dealer Affairs

All is ready for the biggest affair the contractor dealer branch of the electrical industry has ever known—the twenty-third annual convention of the Association of Electragists—International. There is little need to state where this great event is to take place, and when, so it is hoped that this reference here may be pardoned. Washington, D. C., will be the scene of the doings, and the week of October 8 the time. Hotel Washington is to be the official headquarters.

Even at this writing—some time before the opening gun of the convention is fired—reports are coming in to Association Headquarters that many are preparing to go to the capital city. Of course the number going from various parts of Canada, the west coast and distant points within the United States can only be guessed at, but manifest evidence indicates that not a few electrical people will be in attendance from these places and all other parts of the country.

The local folks at Washington too are enthusiastically busying themselves in regard to the convention business which must necessarily be taken care of during the closing days preceding the affair. They are carrying on a rapid fire correspondence with the Headquarters' office and are insisting that everybody going to New York must visit Association Headquarters and receive instructions personally in order to complete final arrangements most successfully.

The fact must also be mentioned here that the ladies are taking more interest in the twenty third annual convention of the A. E. I. than they have displayed in any one previous, and many of them are planning to accompany their husbands and sweethearts to Washington. But the more the merrier, and the largest female attendance possible is urged.

A tentative program of the convention is given below. A meeting of the Executive Committee will take place on Monday, October 8, the first session of which will begin at ten in the morning. The afternoon session will start at two o'clock and arrangements have been made to hold a meeting at eight in the evening to transact such business

as may be necessary before the opening of the general convention on the following day.

Don't forget that the opening session will be held on Tuesday this year, instead of on Wednesday, which has been the custom in the past.

The registration booth will open at four o'clock on Monday, October 8, and this will be found at the entrance to the general assembly hall. Convention sessions will begin in the morning and afternoon at ten and two respectively. The tentative program is as follows:

Tuesday, October 9

Opening of General Convention—Frank T. Shull, Washington, Chairman Local Committee.

Welcome to Washington—Maj. J. Franklin Bell, Washington Commissioner of District.

Response — President James R. Strong, New York City.

Official Business.

Wired Wireless—General George O. Squier, Chief Signal Officer, Washington, D. C.

Introduction of Gladhand Committee.

Get Together Luncheon for Members, Ladies and Guests.

Afternoon Session

Sectional Meetings, Conducted by Specially Appointed Chairmen, Held in General Assembly Hall. Open to All.

Power: How to Sell and Install It. Special Chairman, Wm. J. Shore, New York City.

Appliances: How to Demonstrate and Service Them. Special Chairman, F. J. Saylor, Philadelphia, Pa.

Installation Problems. Special Chairman, J. C. Hatzel, New York City.

Evening Session

Annual Meetings of the Labor Sections—Open Shop, Parlor A; Union, Parlor B.

Informal Dance in Hall of Nations.

Wednesday, October 10

Women in the Industry—Miss Sarah M. Sheridan, Vice President Detroit Edison Co., Detroit, Mich.

Personality in Business—Roe Fulker, Washington, D. C.

Merchandising—John F. Gilchrist, Vice President Commonwealth Edison Company, Chicago, Ill. Discussion.



The Cast of the Play "Do It Electrically." Standing, Left to Right: Mrs. F. T. Shull, Arthur F. Carroll, Director; Harry Leese, Y. A. Price, Arthur Hathaway, W. M. Jewell, J. Frank, L. T. Blaisdell, Chairman Play Committee; Marjorie A. Brown. Sitting, Left to Right: C. F. Noack, Dorothy Waters, C. H. Renfro, Mary Ellen Smith, Thomas Shull

Afternoon

Specially Conducted Automobile Tour to the Lincoln Memorial and Mt. Vernon, the Home of George Washington, returning by way of Arlington Cemetery, to visit the resting place of the Unknown Soldier.

Evening

Do It Electrically—An Electrical Play Staged by the Electric League of Washington, D. C., at Carroll Hall, G. Street, N. W. Written by Thos. F. Chantler of the Staff of the Society for Electrical Development, and directed by Arthur Carroll of Washington, D. C.

Thursday, October 11

Debate: Resolved, That the Best Results Are Obtained by a Combined Contracting and Merchandising Business. Leaders to be Selected.

Illumination—Samuel L. Hibbin, Westinghouse Lamp Co., New York City. Discussion.

The Electrical Press—Earl E. Whitehorn, New York City.

The Fundamentals and Organization

of a Retail Electrical Business—Frank E. Watts, New York City. Discussion.

Afternoon Session

Discussion of the National Electrical Code—Led by A. Penn Denton, Kansas City.

The Association and Its Development Work—Laurence W. Davis, New York City.

The Eidlitz Plan: Back to Quality, Sane Costs and Fair Dealing—Charles L. Eidlitz, Commissioner Greater New York Contractors, and Chairman Board of Governors, New York Electrical Board of Trade. Discussion.

Motion Picture—Buster Keaton Comedy—Electric House—Associated First National Pictures of Washington, D. C.

Evening

Annual Dinner Dance, Informal Dress.

Friday, October 12

Distribution from the Manufacturers' Viewpoint—J. S. Tritle, Merchandise Manager, Westinghouse Company.

Debate:

Whereas, The rate of fire insurance is based on hazards of building construction; and

Whereas, Super standard electrical installations would reduce hazards of fire from electrical causes; and

Whereas, Reduction in rate for super standard installations would

(1) be in the interest of the public;

(2) improve the quality of electrician construction;

(3) tend to build up good will in the industry;

Therefore, be it Resolved, That such a plan is desirable and feasible.

Leaders to be selected.

The Advantage of Joint Membership in the S. E. D. and the A. E. I.—William L. Goodwin, New York City.

Suggestions by Members.

Report of Resolutions Committee—Jos. A. Fowler.

Afternoon Session

Unfinished Business of Executive Committee.

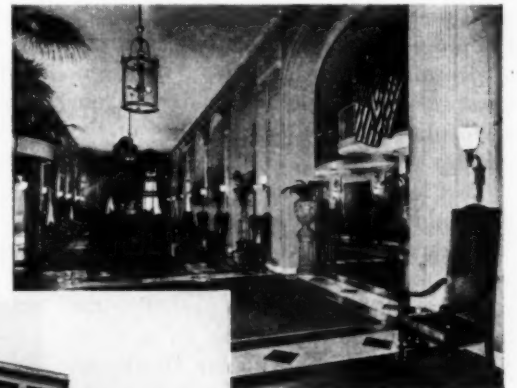
Seeing Washington.

Evening

Visit to the Congressional Library.



VIEWS
OF
HEADQUARTERS
HOTEL
WASHINGTON



Twenty-third
Annual
Convention
at
Washington, D. C.



Opens
Tuesday
October 9
at
10 O'clock

The Convention Hotel and Interior Views of Special Interest to Electragists. Left, the Great Assembly Hall. Right, Lobby and End of Peacock Alley. One End of the Spacious Roof Garden Where All Get Together Luncheons Will be Held May be Seen in the View of the Hotel

Chats on the National Electrical Code

BY HUBERT S. WYNKOOP, M. E.

Monthly Discussion of National Electrical Code Practices by Well Known Authority in Charge of Electrical Inspection, City of New York

A Novel Legal Point

The daily press reports a death by electric shock (at Pittsfield, Mass., I think) which has resulted in the raising of a novel point of law. It seems that an electrician had been called in to perform some additional wiring in a residence. While at work he was summoned by his employers to make an emergency trip to another premises. Before quitting the regular job he warned the mistress that he was leaving bare live ends of wire in the cellar until his return and that she must be careful not to touch them. Later she entered the damp cellar, touched the wires and was killed. It is stated that the authorities are considering prosecuting this wireman for manslaughter.

Some local electragerist who knows the facts is requested to report them in sufficient detail to Farquson Johnson, Secretary of the A. E. I.

Transition Table

Have you seen my "Transition Table", showing where an old code requirement can be found in the 1923 Code? THE ELECTRAGIST announced it last month, and it also is described in this issue.

Dead Switch Blades

The new Code, like the old, requires that "where practicable" switches shall be so wired that blades will be dead when the switch is open. There seems to be no unanimity of opinion as to whether it is "practicable" to build panel boards so that this requirement will be met. At any rate, this requirement is not being generally heeded. I think it's about time that the manufacturers took steps to comply, or show cause for not complying. Every slackness in enforcing one rule makes it more difficult to apply the others.

Studying the New Code

It is interesting to note that the recodified Code seems to be receiving more intensive study than has been accorded to the old Code for some years. In many cases where recodification has merely reassembled existing requirements, and has raised no new issue, questions are being asked which ought

to have been (and perhaps were) asked before. Novelty of arrangement has created new interest. Convenient reference has brought related subjects prominently together. Buried and half forgotten items have been resurrected. If discrepancies or vague requirements exist, they will soon be ferreted out. No work of the magnitude of this recodification should be expected to be free from errors of its own. But the new framework is, we believe, correct; and another revision several years hence ought to remove the criticisms which will naturally attach to the 1923 edition. It is my hope to collect all the comments that may come to my attention, and forward them to the appropriate standing committees of the Electrical Committee through the usual channel, in ample time for consideration prior to the issuance of the next bulletin of proposed amendments. Will electragerists help?

Hard Drawn Wire in Conduit

Can one place hard drawn rubber covered wire in conduit? The Code says that wire drawn in conduit shall have an approved rubber insulating covering. The Laboratories do not label hard drawn rubber covered wire. Therefore such wire cannot be considered as "approved". Furthermore, it might be considered questionable practice to pull hard drawn wire into conduit owing to the stiffness of the wire, which will tend to place greater strain on the covering when drawn around bends.

Fuse at Service

Section 405e of the Code demands a fuse for each ungrounded wire at the service point and within the building. Sections 806b and 806c recognize a condition where the service fuses are placed at the outer end of the service conduit. We must expect some discrepancies of this sort as the outcome of recodification. In this case, however, I think it is safe to say that no inspection department would demand fuses at both ends of a service, and that section 806 can readily be considered as qualified by section 405. We can clear this point up absolutely the next time we amend the Code.

Spark Arresters

A correspondent asks me what a spark arrester is. (You see, people are reading the Code as never before.) I described it as a fine wire gauze formed to fit over the open top of a glass globe used with the old fashioned open type arc lamp, and suggested that if he could find a thirty year old catalogue of arc lamps he would get the picture. And the term has been in each edition of the Code since the beginning.

Supporting Switch Boxes

We do not accept wooden lath as a suitable support for outlet boxes. The reason is obvious. But with switch boxes it is a different matter. The supporting screws are smaller and are not so likely to split the lath. The lath itself can be brought well under the ear of the box. There is relatively little strain on a switch box, which is held in place by the screws in the lath and the half inch of plaster which hugs it, and is helped by the face plate to resist pressure from the front. I think that the requiring of a 7/8 inch block back of the lath should depend upon the character of the workmanship on the job.

Junction and Pull Boxes

How is section 701f of the Code to be interpreted? Well, next time we shall probably say "shall conform to the requirements of section 701e of this Code, except etc."; and if we mean to call for the construction detailed in Underwriters' Laboratories' Standard, we shall probably say that too.

"Outlets"

Now that we have a definition of an "outlet", as related to a branch circuit (807a), we find that there is another kind of an outlet—a switch outlet (1205a)—for a switch is not a current consuming device. While this will cause no confusion in inspection circles, it is desirable that in a future issue of the Code this minor point be cleared up.

Marking Cabinets and Cutout Boxes

I have talked before about substandard boxes, apparently made by some roofer or tinsmith. Now I am wondering why each inspection department that is cursed with this situation cannot de-



X-Ray Galloping Dominoes Are All the Go in Chicago, Says P. A. David, G. L. Chamberlain, Don Hill, G. D. Waters, Bill MacCullom and Jim Jeffrey of the Freeman Sweet Electric Co.

mand flatly that the cabinet or box carry a manufacturer's name or trade mark. The Code seems not to call for this; but in so many instances is the marking required that there ought to be little difficulty in getting identification of the box. If the contractor resists the refusal to approve work carrying unmarked boxes, tell him to send a sample to the office for investigation. After he has had his own way (and has submitted samples from two or three jobs), he will fall into line and will use thereafter marked boxes. Did I hear someone suggest that a contractor who declined to use marked boxes after the matter had been explained to him deserved scant consideration?

Believes in Licensing

As a result of the article on the subject of the licensing of electrical contractors printed in the August number of THE ELECTRAGIST the following communication has been received from N. L. Walker, president of the Walker Electric Company, Raleigh, N. C. It will be remembered that the article in question requested views of readers on this important topic, and it is hoped that additional expressions of opinion may be forthcoming. THE ELECTRAGIST is anxious to determine the needs of the industry in this connection.

On the question of licensing electrical contractors, our objective should be the best and safest work that can be turned out. The licensing of physicians appears to have resulted in better doctors and the licensing of plumbers seems to make for better plumbers.

If you will examine work in many sections of the country I believe you will find generally that work in the cities with licensing ordinance is of much higher class than that in nearby towns where no license is required. Both cities and towns compared will likely have inspection departments, but inspectors will not be called on to examine all of the work done by unlicensed elec-

tricians and there is no opportunity afforded to build up morale.

We believe electrical contractors should welcome the licensing requirement and the inspection of their work by educated and efficient electrical inspectors.

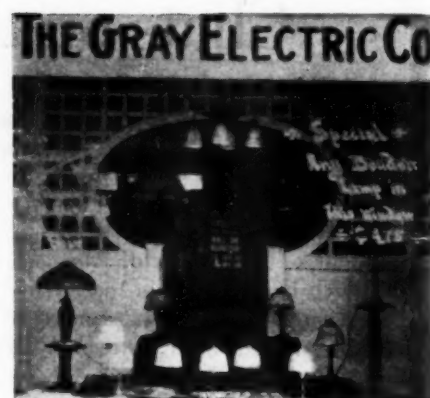
As Bill Goodwin says, there is no law written which cannot be broken, still we feel the need for laws and do enact them. Some are broken by all and all are broken by some, but on the whole they make for better citizenship and a better country. Not ten percent of the laws enacted are near perfection until they have been in operation a year or so and then amended. The New York City licensing law should be so amended that a concern doing work not up to the standard or Code will have license cancelled. Licensing board may have the power to license and the inspection department the power to cancel.

Lighting in Hotels

In a recent article in *Hotel Management*, a publication edited for hotel proprietors and personnel, the manager of a midwestern hotel discussed the ideal hotel at some length. He first explained the hotel's policy of securing the best beds they could buy, and then went on to say:

To my mind the next essential for a homelike room is proper light. During the day large windows furnish our rooms with an abundance of natural daylight and at night we supply enough.

The Westinghouse Lamp Company recently completed an ideal machine shop installation, upon which numerous tests were made. The overhead illumination consisted of 150 watt Westing-



The Gray Electric Company, Springfield, Ohio, Tried a Unique Method of Putting on a Lamp Drive

house gasfilled Mazda lamps, bowl enameled, with Westinghouse R.L.M. reflectors spaced ten feet apart. They were mounted 9 feet 6 inches from the floor to the bottom of the reflector. The overhead units were controlled in groups of four by a ceiling pull switch located in the center of each group, thus permitting a flexible and economical control of same.

The local lighting consisted of 50 watt Westinghouse Mazda lamps with Westinghouse standard bowl reflector and National adjustable arm brackets. These units were mounted on the back of the bench in a position that permitted the arm bracket to be adjusted in any position that the workman may desire or require. The overhead system provided an average intensity of ten foot candles throughout the room, which was sufficient for ordinary work. The local units provided high intensity lighting, and could be moved from one bench to another wherever special illumination was desired.



Daytona, Florida, Now Has Another Distinction in Addition to Being a Well Known Winter Resort. It Has Installed Modern Street Lighting Units and Brought Its Thoroughfare Illumination up to Modern Standards of Efficiency and Beauty

ORGANIZATION ACTIVITIES

STATE CHAIRMEN AND SECRETARIES

State	Chairman	Secretary	State	Chairman	Secretary
Ontario, Canada:	Harry G. Hicks, 203 Church St., Toronto	J. A. McKay, 24 Adelaide St., W., Toronto	Maryland:	A. C. Brueckmann, Keyser Bldg., Baltimore	C. Philip Pitt, 7 St. Paul St., Baltimore
British Columbia:	S. E. Jarvis, 570 Richards St., Vancouver	R. A. Graham, 929 Pender Street, W.	Michigan:	Henry Roseberry, 41 Pearl St., Grand Rapids	H. J. Shaw, 613 Lincoln Bldg., Detroit
Colorado:	J. Fischer, 213 15th St., Denver	H. Alex Hibbard, E. & C. Building, Denver	Missouri:	A. J. Dunbar, Frisco Bldg., St. Louis.	G. E. Haarhaus, St. Louis
Connecticut:	Tryon Smith, 247 State St., New London		New Jersey:	Geo. E. Davis, 23 Central Ave., Newark	
District of Col.:	Frank T. Shull, Elliott St., Washington	H. R. Harper, 635 D St., N.W., Washingt'n	New York:	F. A. Mott, 29 St. Paul St., Rochester	H. F. Janick, 29 St. Paul St., Rochester
Indiana:	T. F. Hatfield, 102 S. Meridian St., Indiana's	A. I. Clifford, 507 Odd F. Bldg., Indianapo's	Ohio:	C. L. Wall, 212 S. Main St., Akron	Walter R. Keefer, 939 E. McMillan St., Cin'nati
Iowa:	Louis L. Corry, 510 Brady St., Davenport		Pennsylvania:	R. W. Keck, Allentown	M. G. Sellers, 1518 Sansom St., Philadelphia
Kansas:	C. S. Smallwood, 1017 N. 5th St., Kansas City	Arthur Tucker, 619 Jackson St., Topeka	Tennessee:	P. W. Curtis, Chattanooga	J. A. Fowler, 10 S. Second St., Memphis
Louisiana:	Robley S. Stearnes, 336 Camp St., New Orleans	I. G. Marks, 406 Mar. Bk. B., N. Orleans	Wisconsin:	L. G. Ross, 1305 Tower Ave., Superior	H. M. Northrup, 25 Erie St., Milwaukee

LIST OF LOCAL ASSOCIATIONS AND MEETINGS

STATE AND CITY	LOCAL SECRETARY	STREET ADDRESS	TIME OF MEETING	PLACE OF MEETING
ALABAMA				
Birmingham	J. R. Wilcox	313 North 19th St.	Tuesday 10 a. m.	Members' Offices
Mobile	Frank Signer	Sigler Electric Co.	Wednesday 5 p. m.	
ARIZONA				
Phoenix	E. A. Cummings,		Tuesday 4 p. m.	Builders Exchange
CALIFORNIA				
Anaheim	Mr. Waite		Each Week, Friday	
Berkley	J. M. Gregory	Oakland	Friday 8 p. m.	Oakland
Covina	F. Rambo		1st & 3rd Monday	Ontario
Fresno	Clyde F. Smith	1162 Broadway	Tuesday Evening	Comm. Club
Long Beach	A. H. Rosenberg	So. Cal. Electric Co.		Municipal Club
Los Angeles	Irvin C. Bruss	118 East 3rd St.		
Oakland	J. Gregory	Pacific Building	Tuesday 8 p. m.	Pacific Building
San Francisco	A. Elpins	165 Jessie St.	12 Noon, Thursday	States' Cafe
South Pasadena	J. Jacobs	1128 Mission Street		Cham. Com. Bldg.
Van Nuys	Los Angeles Ass'n.		Tuesday 6:30 p. m.	Pin Ton Cafe
COLORADO				
Denver	Alex. Hibbard	E. & C. Building	2d & 3rd Tuesdays	E. & C. Building
Manitou			Friday Nights	Col. Springs
Pueblo	H. Ashcraft		2nd Tuesday	Commerce Club
CONNECTICUT				
Hartford	Mr. Cook	Hart & Hegeman	1st Wednesday	Hartford
New Britain	F. Mulvehill			
Waterbury	D. B. Neth	Conn. Light & Power Co.	2d Tuesday Evening	Builders Exchange
DISTRICT OF COLUMBIA				
Washington			2d Thursday	Dewey Hotel
FLORIDA				
Jacksonville	M. A. Ladd	Stinson Electric Co.	1st Tuesday	108 W. Bay Street
Miami	C. E. Pullen	Pullen-Zohl Co.		
GEORGIA				
Atlanta	W. C. Drake	Ga. Ry. & Power Co.	12:30 Friday	Dafodil Res.
ILLINOIS				
Chicago	J. W. Collins	179 W. Washington St.	2nd & 4th Wednesdays	Lumbermen's Exchange
Decatur	E. O. Weatherford	114 E. William St.	1st Wednesday	Y. M. C. A.
Springfield	C. A. Meadow	107 E. Adams St.		
East St. Louis	C. F. Broderick	317 E. Broadway	Saturday 2 p. m.	Arcade Building
La Salle	Edward Blaine		1st & 2nd Tuesday	Post Hall
Quincy	John Harbison	18th & Broadway	2d & 4th Wednesday	214 1/2 No. 6th Street
Rock Island	John Weishar		Monthly	
Streator	William Schroder	613 Tyler Street		
INDIANA				
Evansville	I. A. Welburn	404 Main Street	Every Friday	Y. M. C. A.
Gary	A. B. Harris	570 Washington St.		
Indianapolis	E. V. Knight	307 N. Penn. St.	Every Thursday	Hotel Lincoln
Peru	J. B. Johnston	West 5th Street	2d & 4th Monday	Labor Hall
South Bend	Mr. Moran, Jr.	832 N. St. Louis	1st Tuesday	B. & T. Ex. Building
Warsaw	L. F. Meyers	120 E. Market St.	Wednesday Evening	
IOWA				
Davenport	Louis F. Cory		Monday 6 p. m.	Chamber Com.
Sioux City	F. H. Abbott		Monday 6 p. m.	Jackson Hotel
Waterloo	H. L. Hileman	600 Bluff Street		
KANSAS				
Topeka	H. S. Lee	816 Kansas Ave.	Monday Noon	Elks' Club
Wichita	L. A. Harris	446 North Main	Every Tuesday 7:30	United Elec. Co.
KENTUCKY				
Louisville	Chas. Daubert	921 S. Third St.	2d, 4th Thursdays	B. of T. Building
Paducah	W. R. Kitterjohn		Last Thursday	
LOUISIANA				
New Orleans	Frank Gacheck	406 Marine Bank Bldg.	2 p. m. Monday	406 Marine Bank Bldg.
Shreveport	Percy Elliott	Elliott Elec. Co.	Every Monday	
MAINE				
Portland	N. S. Boothing	222 Middle Street	On Call	
MARYLAND				
Baltimore	George Robertson		Bi-monthly	Soathem Hall
MASSACHUSETTS				
Fitchburg	R. M. Gowell		1st Monday	Fay Club
Haverhill	H. W. Porter	24 West St.	2nd Monday	El. Light Station
Springfield	Mr. Ayers	103 Rochelle St.		Chamber of Comm.
West Medford	H. J. Walton	Malden Elec. Co.	Monthly	Various
Worcester	J. W. Coghlin	259 Main St.	2d Thursday	44 Front Street
MICHIGAN				
Battle Creek			Every other Tuesday	Post Tavern
Detroit	H. Shaw	613 Lincoln Building	Last Thursday	G. A. R. Hall
Flint	J. Markle	718 S. Saginaw		
Grand Rapids	Henry Romyn	40 Ionia Av., N. W.	Tuesday Noon	Association of Com.
Kalamazoo	M. Randall	Exchange Place		Chamber Commerce
Saginaw	E. T. Eastman	209 Brewer Arc.		

THE ELECTRAGIST

ORGANIZATION ACTIVITIES—(Continued.)

STATE AND CITY:	LOCAL SECRETARY	STREET ADDRESS	TIME OF MEETING	PLACE OF MEETING
MINNESOTA				
Duluth	D. Ehlert	210 W. 1st St.	Subject to Call	Builders' Exchange
Minneapolis	W. I. Gray	511 S. Third St.	2d & 4th Monday	Elk's Club
St. Paul	E. Hoseth	993 Selby Avenue	2d & 4th Tuesday	
MISSOURI				
Kansas City	R. L. Hutton	212 Admiral Boulevard	6:30 p. m.	University Club
St. Louis	E. Bowman	644 Century Building	2d Tuesday	American Hotel
NEBRASKA				
Lincoln	G. G. Kingham	142 S. 12th Street	1st & 3rd Monday	C. of C. Building
Omaha	E. H. Brown	1818 Harvey St.	2d and 4th Thursdays	Builders' Exchange
NEW HAMPSHIRE				
Portsmouth	F. C. Hatch	Kittery	2d & 4th Wednesdays	
NEW JERSEY				
Atlantic City	F. P. Wright	16 Ohio Ave.	1st Thursday	Malatesta Hotel
Jersey City	Wm. Doellner	843 Bergen Ave.		P. S. Building
Long Branch	Chas. Maggs	462 Bath Ave.	1st & 3rd Mondays	Commercial Hotel
Newark	George E. Davis	23 Central Ave.	1st Monday	23 Central Ave.
Paterson	H. M. Desaix	88 Ellison St.	Last Friday	P. S. Building
NEW YORK				
Albany	E. A. Stephens	71 Trinity Place	3rd Thursday	Pekin Restaurant
Binghamton	A. H. Hyle	44 Court Street	1st & 3rd Wednesdays	Johnston Building
Brooklyn	H. F. Walcott	55 Washington Street	Fridays	507 Elec. Building
Buffalo	E. P. McCormick	Oneonta	3rd Tuesday	Vanon
Cooperstown	B. B. St. John	Binghamton	Tuesdays	Chamber Commerce
Endicott	A. H. Hyle	21 Main Street, S.	3rd Monday	Manufacturers Ass'n.
Glens Falls	W. F. Coombs	309 Main Street		
Jamestown	Henry Lund	Mincola		
Kingston	M. C. Rivenberg	Tottenville		
Nassau-Suffolk	Edwin M. Seaman	45 Barclay Street	1st Thursday	Building Trades
New Brighton	E. L. Taylor	906 Sixth Ave.	2nd and 4th Wednesdays	226 W. 58th St.
N. Y. Section, No. 1	J. W. Hooley	Olean L. & P. Co.	Monthly	Various Stores
Independent	A. Lincoln Bush	29 St. Paul Street	3rd Thursday	Eggleston Hotel
Section No. 3	L. F. Luedicke	So. Glen Falls	1st and 4th Mondays	Saratoga and Glens Falls
Olean	H. C. Thuerk	McClellan St.	2d and 4th Thursdays	
Oneonta	B. B. St. John	P. O. Box 809	Subject to Call	
Rochester	H. F. Janick	Tottenville, S. I.	1st and 3rd Mondays	
Saratoga Springs	W. F. Camp	First Street	1st and 3rd Thursdays	St. George, S. I.
Schenectady	Mr. Spengler	228 Genesee Street	1st Tuesday	Gas Office
Syracuse	H. N. Smith	Roth Block	1st Tuesday	Elk's Club
Tottenville	W. Taylor	Westbury	3rd Fridays	Utilities Building
Troy	H. W. Boudry	Manor House Sq.	Monthly	
Utica	W. C. Ballda	211 Water Street	Alternate Thursdays	2nd Nat. Bank Bldg.
Watertown	L. B. Smith	Bellaire	Call of Secretary	Bellaire
Woodmere	Geo. La Salle	4th St. and Walnut	1st Tuesdays	Industrial Com.
Yonkers	Mr. Mayer	939 E. McMillan	Tuesday 3 p. m.	Chamber of Com.
OHIO				
Akron	Harvey Uhl	Electric League	Every Thursday	Hotel Statler
Bellaire	J. Blumberg	1517 Franklin Ave.	1st and 3rd Mondays	Builders' Exchange
Canton	H. E. Sanders		On Call	Various
Cincinnati	W. R. Keefer	16 Huron Bldg.	1st Wednesday	Nat. Exchange Bank
Cleveland	George D. Bury	Builders' Exchange	Every Wednesday 8 p. m.	16 Huron Building
Columbus	O. A. Robins	Cal. Ore & Power Co.	Monday Noon	Y. M. C. A.
Dayton	M. H. Gray		3rd Monday	
Springfield	D. C. Hartford	Bethlehem	Last Thursday	
Steubenville	J. Kelly	510 W. Main Street	Last Thursday	
Toledo	F. F. McBride	Bethlehem	Monthly	
Youngstown	S. C. Clark	Builders' Exchange	Monthly	
OREGON				
Medford	A. W. Hill	434 S. Sheppen	3rd Friday	Builders' Exchange
PENNSYLVANIA				
Allentown	A. H. Hill	1518 Sansom St.	2nd Thursday	Underwriters Office
Bethlehem	W. T. Kleppinger	4th Avenue	1st Thursday	1518 Sansom St.
Catasauqua	C. E. Blakeslee	Board of Trade Bldg.	Tuesdays	4th Avenue
Dubois	G. E. Hill	Dubois	Monday	Zenke's
Easton	Earl Stokes	Penn. Pr. & Lt. Co.	Tuesday Evenings	Penn. Pr. and Lt. Co.
Erie	A. Deen	E. King Street	2d & 4th Tuesdays	
Lancaster	M. G. Sellers	35 Westminster Street	1st Thursdays	
Philadelphia	Fred Rebels	Sumter, S. C.		
Pittsburgh	A. J. Fowler	Ideal Electric		
Scranton	C. E. Blakeslee	412 Kirby Avenue	Wednesday	
St. Marys	Ambrose Saricks	615 Market Street	Noons	
Wilkes-Barre	A. E. Harris	285 Madison Av.	Monthly	
York	Herbert C. Hill	8 Ave. and Church	Every other Wednesday	
RHODE ISLAND				
Providence	E. L. Cashion	409 S. Eway	On Call	409 So. Eway
SOUTH CAROLINA				
Columbia	E. C. DeBruhl	1515 No. Campbell	Ev. Tuesday	303 Martin Building
Greenville		69 E. 4th South	Wednesday 12:15 p. m.	Newhouse Hotel
TENNESSEE				
Chattanooga	Carl Schnider	Lynchburg	1st Wednesday	Local Stores
Knoxville	H. M. Moses	Arcade Building	Wednesdays	Old Colonial Club
Memphis	H. A. Street	Jefferson and Grace Sts.		
Nashville	J. Shannon	3rd and Madison St.	Thursdays	Elk's Club
TEXAS				
Dallas	H. A. Brewster	223 Cherry St.	1st Thursday	Nicolet Building
El Paso	R. S. Murray	719 Majestic Bldg.	2nd Tuesday	Republican Hotel
UTAH				
Salt Lake City	Gus. Forsberg	1545 W. Boulevard	1st Tuesday	Racine Building
VIRGINIA				
Lynchburg	W. M. Elliott	The Gringer Co.	Bi-weekly	Christie Elec. Co.
Norfolk	K. D. Briggs	c/o N. Electric Co.	2d and 4th Monday	
Richmond	W. A. Cutlett	c/o Doerr El. Co.		
WASHINGTON				
Seattle	Rush McCarger	McGill College Ave.	Monday 8:00 p. m.	Elec. Inspection Office
WISCONSIN				
Green Bay	John B. Tingley	128 Osgoode St.	1st and 3rd Wednesday	Chamber Commerce
Milwaukee	Thos. W. Nixon	Electric Shop	2nd Tuesday	Board of Trade
Racine	F. H. Patrick	24 Adelaide St.	Every Tuesday	425 Pacific Building
CANADA				
Calgary	E. W. Beard	929 Pender Street	2d and 4th Thursdays	Notre Dame Building
Guelph	W. E. Lemon	609 Moy Ave.		
Hamilton	K. J. Donoghue	General Elec. Co.		
Kitchener	O. S. Lyles	609 Moy Ave., W.		
Montreal	G. C. L. Brassart			
Ottawa	A. C. McDonald			
St. Catherine	A. J. Desand			
Toronto	I. A. McKay			
Vancouver	R. A. Graham			
Windsor	A. H. Cook			
Winnipeg	R. N. Elgar			
Niagara Peninsular	W. H. Mackenzie			

Itinerary Changed

Southern Trip of A. E. I. Officials is Rescheduled

President James R. Strong of the Association of Electragists announces a change in the itinerary of the southern trip to be taken by him and Laurence W. Davis, director of promotion and development of that organization, during the month of November. It was found that according to the first schedule, as published in recent issues of this magazine, more or less duplication of travel would result. The new itinerary, by obviating this undesirable condition, will also make for better conventions, it is believed.

This southern trip of the A. E. I. officials is similar in nature to the recent nationwide trip undertaken by them during which they held Divisional conventions of the Association in the interests of the membership in the respective Divisions. In view of such a large area covered by the one Southern Division, in which practically all the conventions will take place, the meetings to be held on this tour, however, cannot be known literally as Divisional affairs, although each respective gathering will be conducted the same as if this were the case.

The membership in this part of the country is urged to attend the nearest one of these conventions, and it is hoped that non members who are eligible to join the A. E. I. also will be able to be present in numbers at these affairs. The messages of the officials are known to be of a most helpful nature to electrical contractors and dealers and will embrace a number of the foremost phases of the business of the industry at the present time.

The new schedule is as follows: Leaving New York on Monday, November 5, the officials expect to arrive in Atlanta, Ga., at about seven o'clock on the following day. A convention and possible other meetings are planned for this city on Wednesday, November 7, before departing that night at eleven o'clock.

On Thursday, November 8, a luncheon meeting is to take place at Birmingham, Ala., in view of the arrival there at 5:30 o'clock in the morning. Departure will be taken at four o'clock in the afternoon in order to arrive in New Orleans early on the following day.

At New Orleans, La., an all day convention with dinner is planned for Friday, November 9, and the following two days, Saturday and Sunday, also

will be spent there. By leaving New Orleans late Sunday afternoon it is hoped to arrive in Memphis early the next morning, Monday, November 12.

At Memphis, Tenn., a luncheon at noon and a dinner at night have been arranged, while the afternoon is to be spent in visiting members. The officials depart for St. Louis at ten P. M. and expect to arrive there the next morning at about seven thirty o'clock.

Luncheon, afternoon meeting and dinner are to be held in St. Louis, Mo., on Tuesday, November 13, and by leaving for Louisville, Ky., at 9:20 in the evening it is expected to arrive in that city the following morning at shortly before seven o'clock. Luncheon and afternoon meeting are scheduled for Louisville on Wednesday, November 14.

The final convention of the southern trip is to be held at Indianapolis on November 15. A luncheon will be held in that city, after which there will be an afternoon meeting. President Strong will then return to New York City. After his return he will endeavor to arrange a convention in Toronto, Canada, where he will have covered all of the eight Divisions of the Association.

Convention Glad Handers

The Glad Hand Committee was so enthusiastically approved at the convention of the Association of Electragists last year that a similar committee has been appointed to carry out the idea at this year's big affair at Washington, D. C. Joe Fowler of Memphis, Tennessee, otherwise known — and well



Samuel Adams Chase



E. C. Gramm

known, too—as the silver tongued orator of the south, had the honor of the chairmanship of this committee a year ago, and only those who were in attendance at Cincinnati know how well the work was done by him.

Accordingly, it was felt that at this the twenty third annual meeting of that Association another good man should be chosen to head the glad handers, one whose qualifications combine a knowledge of the industry and a wide acquaintanceship therein in addition to having the happy though rare faculty of a manifestly good mixer.

Who is the man that has been chosen? Why, Samuel Adams Chase, of course. And those who selected him dare anybody to point out a better man for this peppy job. He is an honorary member of the A. E. I. and is associated with the Westinghouse forces. If anyone has a wider acquaintance than genial Sam let him step up. As far as the learning about the industry and the personality factors are concerned, who can name an individual more thoroughly qualified than is good old Sam Chase?

So every electrical man should rejoice in the selection of the chairman of the Annual A. E. I. Convention Glad Hand Committee. Surely he will have the wholehearted backing of all who attend—and who is not?—the big electragist jambori in Washington, D. C., at the Hotel Washington, October 8 to 12.

But this is not all. There is to be another glad hander in the work of that committee who should be applauded at this time, and such a one is none other

than E. C. Gramm of the capital city itself. He will lead the local glad handers and thus assist Chairman Chase in acquainting everybody all over the country with the Washington boys—and girls—those who have made the occasion of the twenty third annual affair such an enjoyable one.

So don't forget Brother Gramm when you praise the efforts on the part of leaders of the convention Glad Hand Committee after the big doings are all over. For he will have done much to develop the spirit of good fellowship among the attendants before, after and between the sessions. And now let's give three lusty shouts for the body of glad handers who will make your stay in Washington during the A. E. I. convention an occasion of joy and gladness; one for the chairman, Samuel Adams Chase himself, one for E. C. Gramm, his worthy assistant, and one for the other members, all of whom have pledged themselves to give their best in this glad hand undertaking.

Penn State Meeting

The Pennsylvania State Association of electrical contractors and dealers held its semi annual meeting at the Sterling Hotel in Wilkes Barre, Pennsylvania, on Wednesday, September 12th. While the attendance was not as large as in previous years, about 50 men being present, yet the interest shown was very enthusiastic and a fine program was carried out.

The convention opened with a get together luncheon at noon at which the community singing aided by a very good orchestra proved a great feature. During the afternoon a business session was held with President R. W. Keck in the chair, and the reports of the various committees and from M. G. Sellers, secretary of the Association, showed that the interest of the electrical contractors and dealers of Pennsylvania have been carefully watched at every turn during the past six months.

The report of a joint committee of plumbers, steamfitters and electrical associations toward improvement of conditions of working for subcontractors was submitted by Secretary Sellers and unanimously approved.

The convention closed with a banquet in the evening at which the speakers were Harry Kirkland on the subject of "Standardization of Local and State Inspection Laws", and Laurence W.

Davis, from A. E. I. Headquarters, who talked on "The Eidlitz Plan."

Many of the delegates to the convention remained over until Thursday to attend a beefsteak luncheon as the guests of the Wilkes Barre local Association.

Code Transition Table

As announced a Transition Table has been issued by the Association of Electragists to assist in finding requirements in the new edition of the National Electrical Code which could be easily located in the old edition. Hubert S. Wynkoop, a member of the Recodification Committee and who is well known to readers of THE ELECTRAGIST through his monthly discussion of the Code in this magazine, is the author, and he is especially well qualified to complete a work of this kind.

While the inspection interests are expected to be most interested in this Transition Table, for it will prove invaluable to them, it is also felt that contractors and dealers, central station men, and others in the electrical industry, will find this a definite aid in helping to familiarize themselves with the new Code requirements.

The Transition Table is sold for ten cents a copy, postage paid, and a lower price will be quoted on quantity orders. All interested are urged to send their order at once to the Secretary, Association of Electragists, 15 West 37th Street, New York City.



President James R. Strong of the Association of Electragists Who Will Conduct the Ceremonies of the 23d Annual Convention

Brooklyn-Queens Outing

Eventful Occasion Which Took Place at Long Beach Was Immensely Enjoyed

An electrical outing was held by the members of the Electrical Contractors' Association of Brooklyn and Queens on August 22 at Long Beach, Long Island. About one hundred fifty attended, which was a goodly number in view of the inclement weather that prevailed.

Automobiles were graciously provided by various individuals who have prospered to the extent of affording such luxuries, to take the attendants to the beautiful summer resort and all met at a central point in the city. The start was set for 10:00 A. M., but a slight delay was occasioned when Secretary Walcott, who was custodian of the tickets, was called upon to settle with one or two ringers.

Everybody arrived at the beach in due time, however, just before lunch, which was served in the spacious dining hall of the Hotel Nassau instead of at the Castles by the Sea restaurant where up to the last minute it was planned to serve it. And when the bounteous repast had been indulged in the spirits of all were high, not to say out of sight.

Immediately after lunch the first outing event was put on consisting of various swimming contests, and prizes were awarded to the winners. Then came the sports on the beach. A baseball game was the first event and after that were a number of sprints and dashes entered into by everybody from the light flyweight class to the fat men's class—men, women and children all included. The peanut race, last on the list, was well contested, and it was only through the quality of veritable Solomonness on the part of the judges that the prizes were satisfactorily passed out.

At six thirty dinner was served and it was a hungry crowd that sat down to the well cooked meal. Toasts, begun at the luncheon, were continued with manifest zest in behalf of the different ones who had helped to plan the outing. Louis Kalischer, Harry Walcott, his secretary, Miss Smith, and Hugo Tollner were among those who were thus honored, and the only trouble with such ovations, said Hugo, was that he missed a perfectly good baked potato every time he sat down after rising to pay his respects.

After the dinner there was speaking. It was hoped to have the pleasure of listening to Commissioner Charles L. Eidlitz, but he was prevented from attending, so the reins were left largely

in Sam. Chase's hands to drive the oratory wagon over the speakers' platform and tell the good stories which were expected to come from the lips of Mr. Eidlitz. The good will promoter of the Westinghouse forces arose to the occasion splendidly, and when he sat down after a more or less strenuous speech of half an hour or so the applause which was thunderous in volume was only outdone by the hearty laughter resulting from his last joke. Other speakers included T. I. Jones of the Brooklyn Edison Co.; C. M. Sheehan, deputy commissioner of water, gas and electricity; Wm. L. Goodwin of the Society for Electrical Development, and John MacIntyre, secretary of the New York Electrical Board of Trade. Dancing was indulged in until midnight.

Members of the outing committees were as follows: Committee on Prizes, Louis Kalischer, D. Davidson, Frank A. Libbon, Hugo Tollner; Committee on Arrangements, L. J. Parker, Hugo Tollner, Henry Greenblatt; Committee on Water Sports, J. J. Schneider, J. Bayers, Jr., Jacob Greenblatt, A. W. Reamer; Committee on Beach Events, Leland J. Marcellino, James Lewis, Louis Levy; Chairman of the Outing Committee, Henry F. Walcott.

To Explain Eidlitz Plan

It is expected that the announcement to the effect that Charles L. Eidlitz, commissioner of the Greater New York Contractors, and chairman board of governors of the New York Electrical Board of Trade, is to address the annual convention at Washington of the Association of Electragists, will influence a large attendance. He will speak on the subject of "Back to Quality, Sane Costs and Fair Dealing," and the tenta-

tive program on another page shows the time he is to appear.

On his recent 10,000 mile trip across the country President James R. Strong of the A. E. I. found considerable sentiment in favor of adopting the Eidlitz Plan in various cities. He was called upon by practically all his audiences to explain this movement, and in view of such a widespread interest in the plan it is felt by the Association officials that a discussion of it should be made by Mr. Eidlitz himself before this convention.

In this connection a pamphlet explaining the Eidlitz Plan has just been published by the Association of Electragists to be distributed to members. A copy of this may be secured by writing to the Headquarters office.

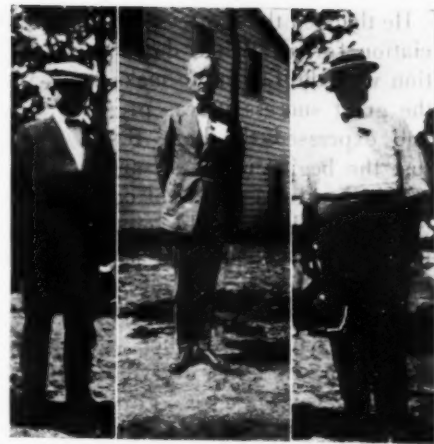
Rhode Island Outing

Electric League and Master Electrical Association Hold Joint Event

After months of work on the part of the committee the outing of the Master Electrical Association and the Rhode Island Electrical League, held at the Hummocks near Wickford, R. I., August 14, proved a great success. The day was ideal, cool for an August day in Rhode Island, and with scarcely a cloud in the sky.

Soon after ten o'clock in the morning the automobiles used to transport the members and guests of the two organizations began to assemble in front of the Rhode Island College of Education in Providence, and shortly after ten thirty the parade to the Hummocks started. There were nearly fifty cars in this parade which was escorted to the city line by two motorcycle policemen. Herbert T. Ayers in charge of transportation acted as marshal.

Upon arrival at the Hummocks a



Reading Across, the Two Presidents, H. G. Lendrim and F. A. Boss, With J. F. Townsend, Judging Games

lunch was served at which H. A. Walker, general chairman of the committee, acted as toast master. He extended a welcome from the committee to all those present, announced that the field events would be held immediately after the luncheon and called attention to the long list of prizes that had been donated. He then introduced Harry G. Lendrim, president of the Master Electrical Association.

Mr. Lendrim extended the welcome of his organization to all those present and devoted a few minutes to reminiscences, recalling it was some thirty years ago that the first clam bakes for the Rhode Island Electrical fraternity were originally held. He called attention to the large attendance and gave it as his opinion that the attendance next year would be double. He assured those present that this was really only a starting point of what would be accomplished in the way of outings.

When Mr. Lendrim had concluded his remarks F. A. Boss, president of the Rhode Island Electrical League, was called upon.



On the Left Are Shown the Members of the Outing Committee. (Sitting) E. C. Tuite, A. N. Grouton, H. E. Dawson, S. E. Choquette and R. A. Gordon. (Standing) I. D. Cooke, F. A. Brown, M. Taylor, H. A. Walker, Harry Lendrim, F. A. Boss, F. G. Thurston, E. A. Tefft, W. A. O'Neil, A. B. Lisle, and Herbert T. Ayers. On the Right, Field Marshall Ayers is Seen Inspecting the Truckload of Contest Prizes

He thanked the Master Electrical Association for all it had done in coöperation with the League to make the outing the great success it was proving to be, and expressed the hope that this was just the beginning of an annual affair, in which all the electrical organizations of Rhode Island would join.

He called attention to the fact that one of the ideas back of forming the League was to get everyone better acquainted with each other and that at a gathering like this, everyone did come to know everyone else. For this reason if for no other such outings are very important to the industry.

Pointing to the work the League is doing he stated that it is the object of the League not only to get the men in the electrical industry acquainted with each other but with the architects and builders. The League has a paid secretary who looks after the detail of the running of the organization. He is in close touch with these architects and is constantly doing work with them which is of great value to the electrical industry.

He is also in close touch with the activities of the Society for Electrical Development.

Following the lunch came the field events beginning with a fifty yard dash run in four heats and a final, a prize of a Gillette razor going to the winner, a knife to the second man, a memo book to the third and an Eversharp pencil to the fourth. It also required a number of heats to determine the winners of the potato race, the contestants in this race being so evenly matched that it was hard for the judges to determine just who was first. The prizes awarded for this race were a pipe, a fob, a memo book and an Eversharp pencil.

These two races were followed by such events as a pipe race, tug o' war, fat man's race, balloon race and similar events, four prizes being given for each event, and a sufficient variety being provided not only to permit of the largest possible number of entries but also to provide a great deal of entertainment for the spectators. The balloon race in particular proved very entertaining.

Instead of the usual method of providing the contestants with blown up balloons and fans and having them fan the balloon to the finishing line, the balloons uninflated were placed about twenty five yards from the starting line, the contestants raced for the balloons, then picking up a balloon each blew it up as they raced back to the starting point. The man who when reaching the

starting point had his balloon blown up the largest was judged the winner.

Immediately after the field events came a seven innings baseball game between a team of electrical contractors, H. B. Rust, Jr., captain, and the Electrical League team, F. A. Brown, captain. Walter Carpenter and W. O'Neill acted as umpires.

During the first inning the contractors got the lead, this inning ending three to one in their favor. In the second the League got two runs to one by the Contractors. In the third inning the League held the Contractors down to no runs but got two themselves and continued to hold them down to no runs except in the sixth inning when the Contractors brought in four runs. The League made four runs in the fourth inning, none in the fifth, three in the sixth and none in the seventh, the game ending twelve to eight in favor of the League.

Following the bake which was the next event after the baseball game there was a six round boxing match between Barney Rivers of Woonsocket and Young Brown of Providence. These boxers developed some speed during the last few rounds and the match was won on points by Barney Rivers. After this climax to a full day of entertainment there was a general exodus for home.

These outings attract men in the electrical industry from all parts of Rhode Island and from Massachusetts and Connecticut. There is always a good delegation from Boston. At the bake 190 members of the two organizations



Franz Neilson, General Counsel for the A. E. I., is an Attendant at all Executive Sessions of the Association

holding the outing and their guests were at table.

Among the features of these outings are the prizes that are donated by firms connected with the industry. This year there were more prizes and a larger variety of prizes than has ever been the case before. Not only were there enough for all the field events but there were so many left over that forty nine were awarded by drawings. A silver loving cup was presented to Frank McGuire for holding the outing ticket having the lucky number and forty eight prizes were distributed by drawing the cards upon which those present had written their names and the concerns with which they were connected.

The donors of the prizes and the articles they gave are as follows:

Union Electric Supply Company, 1 desk memo, 1 desk file, 1 auto guide, 10 Eversharp pencils.

Belcher & Loomis, 1 Gillette razor, 3 pocket knives.

Western Electric Company, 1 fan.

Boss Electric Supply Company, 1 heat pad. Landers, Frary & Clark, 1 waffle iron.

C. P. Myrick, sales manager of the manufacturers of Hot Point Products, 1 urn set complete.

A. H. Allcott, manager of the electric shops, Narragansett Electric Lighting Company, 1 Miller Portable lamp.

Walker Electric Company, 10 cigarette cases. Tilden-Thurber Co., pipe, Eversharp pencil, fob, leather bill fold.

Star Lighting Fixture Co., 2 boudoir lamps.

Blackstone Valley Gas and Electric Company, 2 fancy glass lamps.

Tubular Woven Fabric Company, 15 note books, 2 bill folds.

National Lamp Works, 2 reminder books, 6 keychains.

Albert Mann Co., pipe.

M. W. Dunton Co., 12 soldering kits.

Collyer Insulated Wire Co., 1 spot light, 1 windshield wiper.

Beverly Lights Corporation, 2 candle portables.

Selected Electric Appliance Co., 1 ice cream freezer.

Wetmore Savage, 1 umbrella.

Geo. H. Wahn Co., 1 portable.

Harvey Hubbell Co., 1 folding camera.

The Bryant Electric Co., 1 poker set.

Benjamin Electric Co., 1 silk umbrella.

F. S. Hardy, 1 sweater.

Scranton Show Progressing

The North Eastern Pennsylvania Electric Show planned to be held in Scranton from November 5 to 10 is gaining wide publicity throughout the state and promises to be a banner affair. Many exhibitors already have signified their intention to take large space in various sections of the Thirtieth Regiment Armory where the exhibit is to take place.

Cleveland's Sixth Home

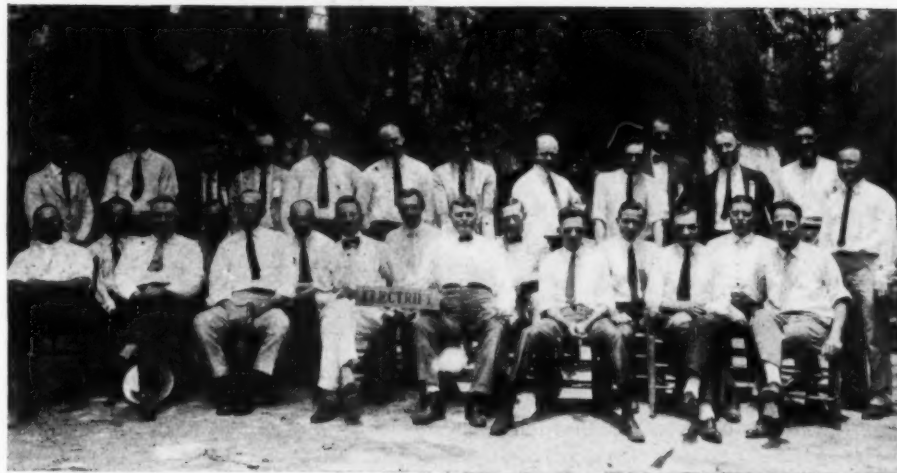
The purpose of the sixth electric home to be exhibited to the people of Cleveland was to point out the importance of electrical devices and equipment in every day life. It was opened on August 19 and closed September 16. The hours for public inspection were from two o'clock in the afternoon until nine thirty in the evening.

There was nothing for sale. The electrical appliances on display were selected by drawing from a complete list of appliances which were manufactured, distributed or retailed by the members of the Cleveland Electrical League, under whose auspices the home was exhibited. An endeavor was made to make clear the advantage of good lighting equipment, a complete wiring installation with tumbler switches conveniently placed, and how time and labor saving appliances will promote health, economy and comfort.

Visitors were enabled to learn the prices of lighting fixtures and appliances by price tags thereon, but no information was given in regard to the construction, material, price and terms of the home itself, and all requesting such information were urged to get in touch with the builder, The Guarantee Building Company, whose representative was located in the basement.

While it is a fact that the average daily attendance at the first two homes to be shown in the fifth city was twice as great as the average attendance at this home, the decrease can be accounted for in that the system of conducting visitors through the home has been greatly changed since May 15th, 1921, when the first home was exhibited, so that with the present system of admitting people in groups of not more than twelve persons, the maximum number admitted during one hour cannot exceed one hundred and fifty.

This home was of the most modern construction and the electrical equipment installed was complete in every detail. Every type of appliance was



The Mississippi League Will Continue to Thrive as Long as This Happy Bunch Are Connected With It. Colonel Stearnes of New Orleans, Former National Association President, May be Seen Sitting Third From the Left With the Brim of His Costly Straw Tucked Under His Right Heel

exhibited including a set of wired furniture.

Exposition in Detroit

The first annual electrical exposition to be staged in Detroit will be held during the week of November 19 at the new Detroit Coliseum which has been opened at the Fair Grounds as an all year round exposition building. The new Coliseum lends itself easily to decoration and by a series of terraces can accommodate hundreds of exhibits on one floor. The entire Michigan electrical industry has been asked to co-operate and invitations have also been sent to electrical organizations in Ohio and Indiana with the idea of creating a tristate affair.

Another Denver Home

Another electric home is expected to be shown to the people of Denver some time this month. The house which is well along in construction is planned to allow for the most complete wiring installation possible. One of its features will be the absence of a coal bin or boiler room in the basement, due to the use of a gas fired boiler with electric thermostat control.

Charleston Outing

The Electrical Contractors and Dealers Association of Charleston, S. C., enjoyed an outing, supper and meeting at the Isle of Palms on August 13. Among the events on the program was a dip in the surf and this proved the contractors to be good swimmers.

John Macmillan won a race from T. A. Brookbanks. In a diving contest between M. J. Grace and Louis D. Rubin it was found by both that the bottom of the sea is a hard surface owing to the water not being deep enough.

An enjoyable supper was served, followed by a business session presided over by T. A. Brookbanks. A talk by W. M. Perry of Columbia was enjoyed on the question of electric work of quality and electric work for a price, showing that cheap wiring costs more in the end.

E. L. Godshalk of the Consolidated Company spoke on standardizing services to homes for safety and protection. Louis D. Rubin spoke on selling only first class and standard appliances and equipment and selling only guaranteed goods that can be depended upon. He stated that most of the repair work



Biggest of All Outdoor Jollifications in the History of the Denver Electrical Industry Was the Third Annual Picnic of the Denver League Held the Middle of August. About 900 Were in Attendance

was on cheaper appliances sold mostly by nonelectrical dealers. Short talks were also made by A. L. Stokes, John Disher, J. P. Connelly and D. A. Amme.

Birmingham Banquet

Electragists of This Southern City Held a Momentous Occasion Recently

Everybody had a good time. That was the verdict of all who attended the big banquet of the Electrical Contractors and Dealers Association, Birmingham, Alabama, on the night of August 15 at the Hillman Hotel of that city. More than one hundred fifty enjoyed the evening filled with fun, good food and cordial hospitality.

J. R. Wilcox was general chairman of the occasion and everything went off in fine shape under his direction. He saw to it that every precaution was taken beforehand to forestall any possibility of anybody not having a good time. So thorough were his arrangements that appropriate instructions were printed and placed about the meeting quarters in order that a spirit of fun might prevail, and among these injunctions was an elaborate sign just above the door of the dining room which advised: "All who enter here leave gloom outside."

A printed program was provided, but it proved a fake. Members of the association and their wives were on it for recitations, songs, speeches, music, etc., all unwarned. They opened their program and saw for the first time their responsibilities. One man wanted to grab his hat and make for the door. Several were down for songs who would have been arrested had they tried to disturb the peace of the evening. The wife of one member was down for a saxophone solo, and her husband said she had never been introduced to one, much less play. No one man, not even the general chairman, knew all of what was planned, so it was a frolic for all.

The decorations and lighting effects were unusually good. The room was decorated with evergreens and colored tissue paper. Across the ceiling were strung about two hundred fifty various colored lights, interwoven with the evergreen. These bulbs were so connected that when they were flashed the light seemed to crawl across the room, one streamer following another. They were also arranged so as to produce intermittent flashes.

The program included two interesting moving pictures. One was the Alabama Power Company's film, "Back of the Button," telling in an interesting



The Birmingham Electrical People Were Photographed Just Before Partaking of the Cantaloupe a la Rosette After Indulging in an Abundance of Celery Sockets, Mazda Pickles and Current Olives—Horrors!

way the story of electric service and the company's own service. The other showed Edison on a trip through a plant of the General Electric Company.

The menu also carried out the electrical spirit and the dishes were given such names as 1,000 watt dressing, Mazda pickles, celery sockets, current olives and the like. An orchestra furnished music throughout the evening and after the fun was over there was dancing.

The officers of the Birmingham Association are: A. P. Bagby, president; D. B. Clayton, vice president; J. R. Wilcox, secretary treasurer; J. L. Ellis, local representative

The committees in charge of the dinner were: J. R. Wilcox, general chairman; Arrangement—A. P. Bagby, D. B. Clayton; Entertainment—John A. Braun, Robert Gandy; Decorations—S. M. Bernheim, J. L. Ellis; Lighting Effects—J. M. Middlebrooks; Publicity—

R. M. Munroe; Special Wiring—J. W. Sloss, John Vincent, J. Z. Walker; Doorkeeper—George Tragressor.

Nassau-Suffolk Affair

The regular quarterly meeting of the Nassau-Suffolk Association of Electrical Contractors and Dealers was held at Ed Boyne's Hotel, Babylon, Long Island, on September 12. A group fairly representative of the membership was in attendance.

Arrangements were made with the General Electric Lamp Company for the speakers, who discussed matters of general interest to all. Secretary Edwin M. Seaman, under whose direction the work of the meeting was largely carried out, expressed the opinion that the business transacted at this quarterly conference should be productive of much good to the Association.

Appoints Substitute

Owing to the press of early fall business Clyde L. Chamblin of San Francisco, Executive Committee of the Association of Electragists representing the Pacific Division, will be unable to attend the annual convention of the Association in Washington, D. C., the week of October 8.

Walter Spencer of Oakland, California was appointed as his substitute, who will be present at the convention to represent the Pacific Division in place of Mr. Chamblin. Mr. Spencer is president of the Spencer Electric Company of Oakland, and is one of the most progressive electragists in the country.

Louis Kon Resigns

G. C. L. Brassart has succeeded Louis Kon in the position of secretary of the Electrical Contractor Dealers Association of the province of Quebec and also as secretary manager of the Electrical Coöperative Association, that province.



Laurence W. Davis, A. E. I. Director of Promotion and Development Will be on Hand to Greet You at the Big Convention

Joint Committee Meets

Milan R. Bump Succeeds E. W. Lloyd as General Chairman

At a meeting of the Joint Committee for Business Development held in New York City on August 30, Milan R. Bump was elected general chairman of the Joint Committee to succeed E. W. Lloyd, who is obliged by press of business in Chicago to relinquish the duties this year. Mr. Bump is chief engineer of the Henry L. Doherty interests and was president of the National Electric Light Association in 1921 and 1922. The selection of vice general chairman was postponed until the next meeting.

President Johnson of the N. E. L. A. was elected a member of the Joint Committee, as were Norman T. Wilcox, chairman of the Commercial National Section, N. E. L. A., and Albert Wahle. Mr. Wilcox is with Stone & Webster Co., Boston, and succeeds Oliver R. Hogue, past chairman of the Commercial National Section. Mr. Wahle is connected with Albert Wahle Company, Inc., New York, and succeeds Fred R. Farmer as representative of the National Council Lighting Fixture Manufacturers.

Chairman Baylor of the Wiring Department, Chairman Greenwood of the Appliance Department and Chairman Zimmerman of the Lighting Department submitted reports of the activities of their respective departments during the past year, at the same time making recommendations of activities to be followed during the coming year. The reports of the other three departments, power, heating and melting, and electrical transportation, will be submitted at the next meeting of the Joint Committee. It was decided to send these reports in full to all the Joint Committee Correspondents.

William L. Goodwin of the Society for Electrical Development reported on a number of publications which his organization is preparing. A revised edition of "How to Make Your Show Window Pay Your Rent" will be off the press in a few weeks, together with an advertising supplement for electric home exhibits. A book on industrial heating and one on trucking by electricity will follow. Mr. Goodwin reported also that the Christmas Advertising Campaign this year will consist of consumer booklets, which will go to press shortly.

Mr. Lloyd urged that the Lighting Department take up the subject of the

effects of the color of walls and ceilings on illumination.

A committee composed of A. K. Baylor, James R. Strong, O. H. Caldwell and R. S. Hale was appointed to prepare a standardized form for Electrify Club Contests, and it is planned to hold such a contest for electrical men attending the conference of electric leagues at Association Island last month, after which a final form will be prepared.

Mr. Goodwin announced that the business program for the conference, known as Camp Cooperation III, had been worked out and that a constructive meeting was anticipated.

The bulletins which have been sent to the Joint Committee's Correspond-



Milan R. Bump

ents twice a week for several months will hereafter be sent out once a week. It is planned to alternate with a news bulletin and one containing a publication.

The question of radio broadcasting was discussed, and Chairman Lloyd suggested that a series of talks be prepared dealing with electrification and sent to the central stations, urging them to have the broadcasting stations use the material. It was also suggested by Mr. Caldwell that a booking agency of some sort be arranged to centralize this work.

A resolution was unanimously passed thanking Mr. Lloyd for his services to the Joint Committee during the past year. A. A. Brown presented the resolution.

Those present at the meeting were: General Chairman E. W. Lloyd, Presi-

dent Johnson of the N. E. L. A., A. A. Brown, A. K. Baylor, C. E. Greenwood, S. M. Kennedy, William L. Goodwin, F. A. Ketcham, P. R. Labelle, E. B. Gillender, Ralph Neumuller, James R. Strong, Fred R. Smith, J. S. Tritle, Rex J. Cole, Norman T. Wilcox, Albert Wahle, O. H. Caldwell, Frank E. Watts, E. E. Whitehorne, Frederic Nicholas, Farquson Johnson, E. Donald Tolles, H. A. Lane and Harry J. Walsh.

Philadelphia Conference

The opening fall meeting of the members of the electrical industry in Philadelphia took place at the Musical Fund Hall in that city on Thursday, September 20. Kenneth A. McIntyre of the Society for Electrical Development was the principal speaker and his topic was "Interest and Importance." Other subjects of timely interest were presented.

Do It Electrically, Collectively and Effectively was the slogan of this electrical gathering of which Washington Devereux was chairman, Herman Eckstein, vice chairman, Richard H. Silbert, secretary, and William K. Kerford, treasurer.

New York Electric Show

The important part that electricity plays in the operation of the home will be shown in a series of interesting household exhibits at the forthcoming electrical and industrial exposition at the Grand Central Palace, New York City. The show this year will be the sixteenth annual exposition and will be held during the ten days of October 17 to 27.

There will be model apartments in which the local electric light and power companies will show the uses of the various electrical appliances and besides these exhibits there will be trade displays by the manufacturers. There has been great demand for space by those who exhibited last year and as early as July 30 more than eighty percent of the space had been contracted for.

The exhibits of electric household appliances will include kitchen appliances such as ranges, fireless cookers, grills, toasters, percolators and dish washers; house cleaning equipment such as vacuum cleaners and floor polishing machines; electric refrigerators; and laundry equipment such as irons, ironing machines, washing machines and drying machines.

Exhibitors also promise to bring out a number of novelties during the electrical show and according to Lincoln Bancroft, general manager, they will also introduce a number of improvements in the standard appliances.

With exhibits by manufacturers of electric commercial trucks, industrial trucks, passenger cars, storage batteries, and battery charging accessories, the electric vehicle section of the exposition will be a complete automobile show in itself.

The entire side of one floor will be devoted to exhibits showing electrical transportation methods. There will be finished trucks showing the different types of bodies, stripped chassis showing the principles of electric vehicle construction, and special displays of parts and accessories.

The monthly meeting of the Electric Motor Truck Association, to be held during the show, will be devoted to the discussion of transportation problems, and a number of well known speakers will have places on the program.

Participation of the federal government in this year's exposition has been authorized by Washington according to word just received by the show's management. It is announced that there will be exhibits by the Army, the Navy, the Coast Guard Service, the Department of Agriculture and the Department of Domestic and Foreign Commerce. This government display promises to be one of the most interesting and instructive of the whole exposition.

Convention Dates

A catalogue of convention dates supplied by the Society for Electrical Development is as follows:

October

- 1-5—National Safety Council, Statler Hotel, Buffalo, N. Y.
- 2-5—American Institute of Electrical Engineers, (Pacific Coast Convention) Del Monte, Cal. F. L. Hutchinson, Sec'y., 33 West 39th St., New York, N. Y.
- 6-13—American Radio Exposition, Grand Central Palace, New York, N. Y. J. C. Johnson, Gen. Mgr., Amer. Radio Exposition Co., 120 Broadway, New York, N. Y.
- 8-9—Empire State Gas & Electric Assn. Lake Placid, New York. C. H. B. Chapin, Sec'y., 5618 Grand Central Term., New York, N. Y.
- 8-13—Association of Electragists—International, Hotel Washington, Washington, D. C. Farquson Johnson, Sec'y., 15 West 37th St., New York, N. Y.
- 9-21—Home Beautiful Exposition, Philadelphia, Pa. J. H. Goodwin, Sec'y., Real Estate Trust Bldg., Philadelphia, Pa.
- Sometime between October 15 and November 15—Tennessee State Electrical Contractor-Dealer Association, Memphis, Tenn. J. Fowler, Sec'y., Box 1428, Memphis, Tennessee.

17-27—New York Electrical and Industrial Exposition, New York, N. Y. L. Bancroft, Sec'y., 124 West 42nd St., New York, N. Y.

November

- 5-10—Electrical Show (under auspices The Electrical Assn. of Scranton, Pa.). F. L. Smith, Ch. Show Committee, 250 Wyoming Ave., Scranton, Pa.
- 13-15—Southern Assn. of Bell Telephone Employees (Tennessee Division). J. A. Gillespie, Sec'y., Cumberland Telephone Co., Nashville, Tenn.
- 19-22—Electric Power Club, French Lick Springs Hotel, French Lick, Indiana. (Fall Meeting.)
- 19-22—Southeastern Division, N. E. L. A. Tampa, Florida. (Annual Convention.)

Iron and Steel Men Convene

The Association of Iron and Steel Electrical Engineers held a profitable convention in Buffalo, New York, at the Broadway Auditorium September 24 to 28. Over one million dollars worth of apparatus was on display representing the developments of one hundred and fifty of the largest manufacturers in the country.

A special feature was a complete electrified foundry which was in actual operation producing finished castings. Starting with the electric furnace every operation known in modern foundry practice was exemplified. Through the technical sessions practical experiences and data were imparted to the engineers in the various fields of operation.

Improve Credit Conditions

In order to make the electrical contractor-dealer a better credit risk in Detroit the jobbers of that city are co-operating with the local contractor

dealer association with a view to having them adopt better accounting methods.

It has been felt by the jobbers for a number of months back that credit extensions to contractor-dealers were being granted when they were not justified, and in order to overcome this undesirable condition the effort is being made to make such firms realize their costs of doing business.

At regular intervals letters have been sent to the contractors urging upon them the importance of their understanding the situation, and it is hoped that within a period of time the truth may be known relative to the contractor dealer's position in this matter.

A recent letter headed "Sell Your Job at a Profit—Know Your Cost and be Fair to Yourself as Well as to Your Customer" read as follows:

You know your material COSTS, but are you sure of your Labor COSTS?

Do you name your own figures on your jobs, or do you allow your customers and your irresponsible competitors to name your price?

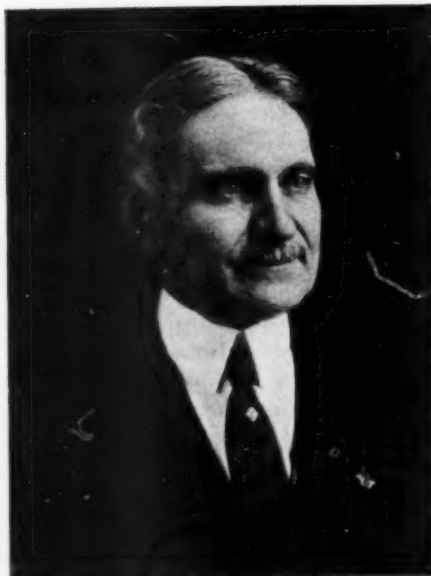
Do you keep an accurate COST of Labor and Material on each completed job, so as to profit on future bids by past experience?

An understandable and workable Accounting System will solve all of these problems for you, and put your business on a profitable basis.

A system of this kind is approved and recommended by the Local Contractor and Dealer Association.

Nationwide Problems

The impressions of O. C. Small of The Society for Electrical Development gained from his recent 10,000 mile trip, the last part of which was in company with President James R. Strong of the A. E. I., in this country and Canada are that despite statements to the contrary, the problems which confront the industry are practically the same in every community. Mr. Small met hundreds of electrical men in the cities visited—New Orleans, Houston, Dallas, Fort Worth, San Antonio, El Paso, Phoenix, Los Angeles, San Diego, San Francisco, Portland, Seattle, Vancouver, Calgary, Regina, Winnipeg, Minneapolis, and Chicago—and in the majority of them addressed representative gatherings on the broad subject of "What is being done to reduce resistance to the sale of electric service and supplies?" The subject was developed along the lines of showing what national associations are doing, to help local organizations, with a picture of the need for both.



E. C. Headrick of Denver is Chairman of the Legislation Committee of the A. E. I.

Mr. Small was much struck by the splendid spirit that exists between the representatives of the various groups in the centers visited and by the fact that leading electrical men in the south and west particularly realize the need for a definite tie in between local and national coöperative organizations.

Slogan Contest

A contest of national scope is being carried on by George Richards & Company of Chicago known as the Hemco Slogan Contest. The sum of \$1000 in free merchandise is to be given to customers of the company's dealers who send in the best Hemco slogans.

For this contest a special counter stand is furnished to dealers which carries one hundred post cards to be torn off, filled in and returned with the slogans. A special hanger for use in the window is furnished as well as two window strips and other display material.

Electric Home Book

"Equipping Your Home Electrically" is the title of a 48 page booklet published by the Electrical League of Cleveland giving suggestions covering the uses to which electricity may be put in the home. The book is well illustrated and contains explanatory diagrams of modern installations of wiring.

The home builder is urged to give most careful consideration to the wiring installation so that future desires for additional electrical service may be fulfilled even though the complete installation is not taken advantage of at first. A detailed analysis of the percentage of cost to allow for all electrical work is given.

Electragist Appointment

D. D. Sturgeon, a prominent electragist of Denver, has been elected vice chairman of the Electrical Coöperative League of that city. As represented by the fact that he is a dyed in the wool electragist, progressiveness is one of the ear marks of his business, which in a short period of twelve years has grown from a meager two man shop on a side street to one of the largest in the city. Seventeen men are now carried on the payroll throughout the year and the volume of business done last year was close to a quarter of a million dollars.

In 1895 Dave, as he is known to some and to others as Dwight, left his home

at Newark, Ohio, for Denver and immediately entered the service of Albert Sechrist, the first lighting fixture specialist in the Rocky Mountain region. During the following seventeen years, Sturgeon passed through every department of that firm which had grown to be the largest fixture manufacturing concern in the west. That his training was well rounded is shown by the success attained in his own undertaking, which included every phase of the electrical contractor dealer business.

It is especially interesting to know



D. D. Sturgeon

that even with a large contracting business, the merchandise department is a money maker, part of which may be due to the fact that both Mr. Sturgeon and his wife are thoroughly sold on the electrical idea. They live in a charming electrical home in North Denver.

Mr. Sturgeon, in addition to memberships in the league, A. E. I., the Denver Electrical Contractors' Association, and Master Builders' Association, takes an active part in the Rotary Club, Motor Club, Press Club, and the Denver Civic & Commercial Association.

New Company Formed

The Reben Electrical Manufacturing and Supply Co., 32 Union Square, New York City, has been formed with Robert R. Reben at the head. This company will act as manufacturer and manufacturers' agent of various lines of electrical supplies.

Among other things Mr. Reben has the national right for a low priced line

of outlet box covers which he is offering to the jobber trade. Mr. Reben was formerly in business with his brother in the Metals & Insulation Company of America.

S. E. D. Executive Session

A meeting of the executive committee of The Society for Electrical Development was held at Staff Headquarters, August 17. C. L. Edgar presided.

The assistant to the president reported on the extensive field work that had been done during the period that had elapsed since the last meeting and gave details of the progress of commodity programs.

W. L. Goodwin and F. M. Feiker were made operating vice presidents. James Smieton, Jr., was appointed treasurer vice R. F. Paige, who has been added to the staff of THE ELECTRAGIST as advertising director.

Considerable interest was displayed in the new Pictorial Service that the Society has instituted, and the results to date show that it has met with general approval by various publications throughout this country and Canada. That the Society's publications have met a definite need is indicated by the fact that over 370,000 copies have been issued during the past twelve months.

Fire Prevention Show

An exposition and international fire prevention congress will be held by the National Fire Protection Association in the 71st Regiment Armory, New York City, October 8 to 13.

Electrical interests are showing considerable enthusiasm for this show as are members of the architectural profession. The architects, who undoubtedly are in a position to do more for the future fire safety of the country than any other class, freely admit that they need the stimulus and the information that such an occasion as this will provide.

The visitor will receive a cumulative impression of the methods for promoting safety from such diverse displays as those covering sprinklers, extinguishers, roofings, fire windows, fire doors, wall materials, flexible tubing, rolling steel shutters, metal trim, metallic lath, electric fire alarms, acetylene equipment products, lightning rods and arrestors, electrical products, fire hose and couplings, sprinkler systems, oil and gasoline burners and storage devices, gas and electric lighting systems and many others. A striking exhibit will be that

of Underwriters' Laboratories, which will occupy a large space.

Among other things, there will be large working models of the column, panel and safe furnaces; a fifteen foot model, of the building, showing its interior; many theatre set models showing characteristic phases of the work, charts indicating progress; a complete display of labels; six animatographs, each of which will have about forty pictures in constant operation; a very large photographic display; several actual testing machines and apparatus, covering fire prevention, chemical, casualty, electrical and burglary features; a special issue of the official publication "Laboratories' Data" for free distribution, and a supply of literature and standards.

Engineers from Underwriters' Laboratories will be in attendance in order to operate machines and models and explain matters to the public.

Street Lighting Booklet

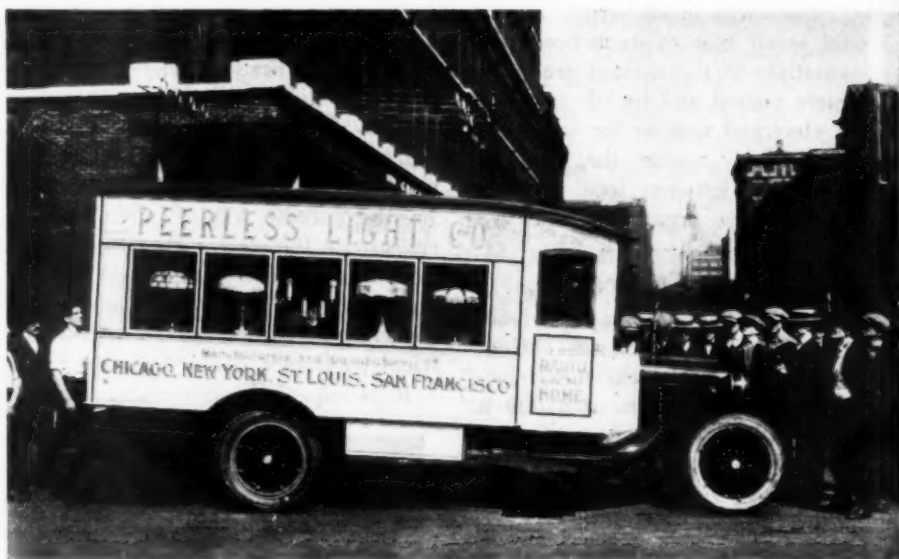
"Scientific Street Lighting" is the title of an attractive booklet published by the Holophane Glass Company of New York City. This has been written expressly for the purpose of being a guide to good street lighting practice, and although it is the second edition many additional features are set forth not included in the first writing.

The booklet is composed of about thirty pages illustrating and describing up-to-date street light practices. The descriptions and explanatory data are of general interest to all electrical men, and the half tone illustrations were reproduced from actual photographs so far as possible. The text covers this phase of lighting from every angle from a scientific analysis to the practical installation.

"Scientific Street Lighting" is free to the trade and all who desire copies are urged to write in immediately as this second edition is expected to be exhausted soon on account of a limited number being printed.

Selling by Automobile

Early in September an automobile truck equipped with electrical displays of portable lamps and fixtures on the outside and numerous trays on the inside was sent out to tour the country by the Peerless Light Company of Chicago. In spreading by this means the vital message of electricity it is the intention to cover everything from a water



The Peerless Palace Being Inspected by a Typical Group as it Stopped According to Schedule in a Midwest City Enroute Across the Country

tank to a metropolis from coast to coast, it is announced.

This wonder auto is known as the Peerless Palace. Besides the lines manufactured by the Peerless Company samples of many other lines which that firm distributes are carried, so that the man in charge of the machine carries his own sample room, so to speak.

The trip will cover approximately ten thousand miles. B. J. Myers, in charge with two assistants, left Chicago Tuesday, September 4, going due west to Davenport, Iowa, then south to St. Louis. They will go west by way of Kansas City, Los Angeles, San Francisco, up along the Pacific coast, then east to New England, south to Tampa, and back to Chicago. It is estimated that it will take about one and a half

years to complete the trip. Besides calling on the electrical and radio trade, open air radio concerts will be given evenings, either in front of the leading evening paper, or a hotel.

Underwent Operation

C. W. Lillick of the Lillick Electric Company, Iowa City, Iowa, has undergone an operation for appendicitis, after an illness for more than a year. In February of this year he sold his business but bought it back in June. Mr. Lillick is now an electragerist and it is hoped that his recovery from this illness will be rapid.

To Consider Insurance

An important feature of the program of the twenty third annual convention of the Association of Electragerists, given tentatively elsewhere in this issue, is a debate on the subject of electrical fire hazards as involving the rate of insurance. The resolution for the debate is as follows:

Whereas, The rate of fire insurance is based on hazards of building construction; and

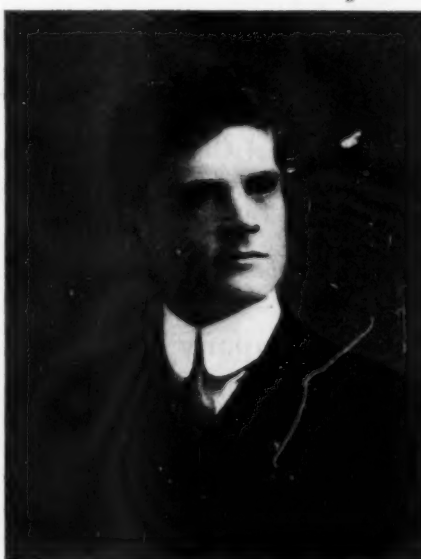
Whereas, Super standard electrical installations would reduce hazards of fire from electrical causes; and

Whereas, Reduction in rate for super standard installations would

- (1) be in the interest of the public;
- (2) improve the quality of electrical construction;
- (3) tend to build up good will in the industry;

Therefore, be it Resolved, That such a plan is desirable and feasible.

This is a subject that has been widely discussed by the members of the A. E. I. for many years and it is felt that intense interest will be developed in this debate at the annual convention.



Joseph A. Fowler of Memphis, Tenn., is Chairman of the Electragerists' Data Book Committee

Two Rhode Island Exhibits

Providence Will Carry Out Important Undertakings During October

The second electrical Home in Providence and the third under the auspices of the Rhode Island Electrical League opened to the public September 29. It will close October 20. This home is very different in many respects from those which have been previously exhibited by the League.

In the first place this is an old house, a building erected about fifty years ago. During the summer it has been modernized, hard wood floors have been laid and new wiring and plumbing installed. It is such a house as a great many people living in the city and especially in the Elmwood section where it is located reside in.

There are eight rooms and a bath, and at the rear of the house a private garage. It is not often that it is possible to secure a house of just this type which makes it feasible to show exactly what can be done with an old house electrically, and the League membership considers it very fortunate that this one could be secured for the purpose.

Though the house has been completely rewired, new outlets are to be installed, and a demonstration made of what an ideal wiring installation really is. In it also will be exhibited all kinds of electrical equipment from an electrically operated oil burner in the steam boiler house heating plant, a complete electric laundry in the basement including an electrically driven household extractor, to the smallest electrical appliances in the different rooms in the house. The garage will be fitted up with all the electrical garage equipment including a battery charging outfit, soldering iron, drills, and the like.

The location of the house is also fortunate. Only a short distance from Broad Street, where the trolley car traffic is probably more dense than it is on any other street in the city, it is also within easy reach of those using the Elmwood Avenue trolley lines. It has been said that one of the street car company officials has stated that more than half of all the people who use trolley cars in the city travel over these two streets.

This fact in addition to the ease with which the place can be reached from all parts of the city by motor car, augurs well for a record breaking attendance during the period the home is open. When we also consider that

there are thousands upon thousands of people who are living in houses just like this one, or at least as near like it as two houses can be expected to be, we find that the educational value of the home is going to be considerably greater than it is in the case of homes everybody may like, but very few can afford to live in.

The usual amount of advertising is being done in connection with this home, and since the furnishing is to be taken care of by the Outlet Company, the department store in the city which does more advertising than any other store, and which is planning to give the greatest possible degree of publicity to this home, it can be seen that there will be few people in the city and vicinity who will not have the home called to their attention. The Outlet Company as one feature of its electric home publicity is planning to use banners on both sides of all its delivery wagons, and these wagons reach every street in the city and the surrounding communities during the period of time the home is to be open. This company is also planning to distribute at least 10,000 invitations to the home. All this publicity will be in addition to that which the League itself will give the home.

The second exhibit for the month of October is to be at the Providence Food Show held in the State Armory during the week of October 29 to November 3. This show is being conducted under the auspices of the Rhode Island Retail Grocers' and Marketmen's Association. Last year 130,000 people attended the show. This year more space is being

sold, more people will advertise it and the publicity plans of the show management are broader than they were a year ago. It therefore is confidently expected that no less than 200,000 people will attend it.

The show has been endorsed by the mayor of the city who is scheduled to speak on the second night, other very prominent speakers will take part, there will be entertainment and educational features, and nothing is being left undone to make this undertaking just as attractive as possible to the people of Rhode Island.

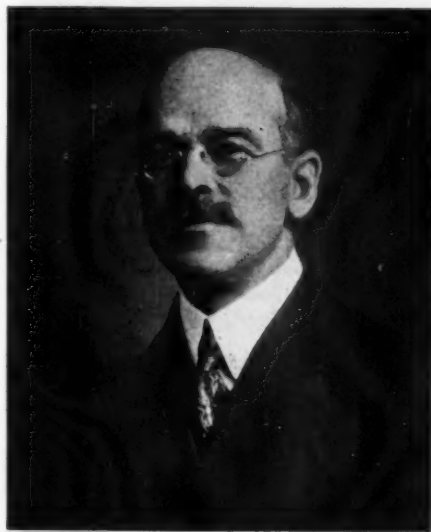
The electrical industry has already engaged space sixty by thirteen feet in size and plans are being made for the exhibit. Though these plans have not been worked out in detail, it is probable that this exhibit will take the form of an educational exhibit. The cost of the space has been guaranteed by a few of the most electrically spirited men in the industry, and they are advocating that it be made a real educational exhibit that is made at the show. It is very probable that this is what will be done.

Figures indicate that the right kind of an exhibit at this show will prove one of the most effective ways of educating the public electrically. The attendance will be large and the cost per person reached will consequently be very small.

In addition to those exhibits, the Rhode Island Electrical League is extending its business building efforts in other directions. A broadside being sent out to members, features a guarantee bond, to be supplied to members of the League.

This bond will be printed on check paper with orange and green ink, the size of the sheet being eight by three inches and the bonds being bound into book form in much the manner that blank checks are bound. Each bond will have a stub permanently bound into the book upon which such a record as the date, the name of the person or firm to which the guarantee was issued, and the address may be entered. The wiring guarantee carries the seal of the League and guarantees the workmanship and material of the installation for a year.

The idea is that when the League members start guaranteeing their work for a given length of time, it will be just so much easier to secure business, because greater confidence is inspired on the part of the customers. Such a guarantee will naturally not make any difference in the methods now being



R. A. L. Gray of Toronto, Canada, is Chairman of the A. E. I. Engineers Committee

used by the League members except that they will issue the guarantees to all people having work done.

The second thing on the broadside is a new cut service that the League is offering to its members. This includes both cuts of the League emblem and for newspaper advertising.

A new thing that is being brought out is a work done by card. This card will be printed on heavy yellow cardboard, in black ink, and will be twenty two by thirteen and a half inches in size. This card will bear the emblem of the League and state that the concern using it is a member. The wording now decided upon is, "The work of electrifying this building done by," the name of the concern and its address being printed in.

Another and the last feature mentioned on the broadside is a metal sign, four by two inches in size. This is a brass sign with black engraving, and is designed to be attached to every meter board. Some of the electragnists in the state are now using such signs or at least signs of a similar type. This one, however, will feature the fact that he is a member of the League. At the left end of the sign there will appear the League emblem with the word member over it. The remainder of the surface will be given up to the words, "Electrical work by," and the name and address of the person or concern using the signs.

In addition to all this new work, the League is planning a very elaborate program for the coming winter, consisting of monthly dinners, indoor picnics and other methods of creating enthusiasm among the membership. Plans are already being formulated for the conducting of an electric home in Pawtucket.

Take New Positions

H. A. Robertson has resigned as general manager of the Varney Electrical Supply Company, Indianapolis, which position he has held for the past twelve years, to become sales manager of the Interstate Electric Company of New Orleans.

C. S. Walker, who has been associated with the Varney Electrical Supply Company for more than a quarter of a century and was president until his resignation became effective recently, resigned to take a position as secretary and treasurer of the Interstate Electric Company.

Joint Committee Items

News of International Interest to Electragnists Briefly Told

The Los Angeles Electric Club recently held its annual outing, but unlike most affairs of this kind, the Californians staged an overnight party. San Diego was the scene of this year's get together, which was staged with the assistance of the San Diego Electric Club. The Los Angeles men left their city on Friday afternoon, August 24, for an all night sail to San Diego. They remained there until evening of the 25th, when the return trip was started.

The electrical men of Columbia, S. C., recently coöperated, with the aid of a local newspaper, in holding a free cooking school for the demonstration of electrical cooking appliances. Several contests were held, electrical household appliances being awarded for the best baked bread, cake, biscuits, etc. Much interest on the part of the women of the city was aroused by the activity.

The electrical men of Casper, Wyo., have joined forces and organized the Casper Electric Club. W. J. Sherwood, city electrician, has been elected president; P. M. Van Sickle is vice president, and J. B. Flannagan is secretary treasurer. It is planned to hold dinner meetings every week.

D. A. Maurer, Joint Committee Correspondent in Fairmont, West Va., and president of the Fairmont Electric Service Company, is a strong believer in ad-

vertising. He recently inserted a two page advertisement in *The Fairmont Times*. On this he has illustrated several of the jobs completed by his organization during the past six months.

W. W. Fenner, new business manager of the Choctaw Power and Light Company, McAlester, Okla., has been appointed state chairman of the Joint Committee for Oklahoma.

The Bancroft Electric Company, Worcester, Mass., recently completed a unique campaign for advertising washing machines, ironers and other appliances. A traveling show room was constructed on a motor truck and the residential streets of the city were visited nightly for a week. No attempt was made to sell from the truck, but excellent results were secured from followup work later.

The Jamestown, N. Y., Electrical Contractor and Dealer Association has worked out a unique plan of coöperation with the local central station which has been productive of much good for all concerned. The local utility, the Western New York Electric Company, does not merchandise electrical appliances, so has leased its display window, located on the main street, to the members of the association for the showing of their goods. The background of the window has been decorated attractively and contains the names of ten members, and every tenth week each member is entitled to the exclusive use of the window to display his goods, the name of the member showing being placed in the foreground of the display. A splendid spirit of friendly rivalry has been the result of this activity, each member vying with the others to produce the most attractive displays. The central station furnishes, free of cost, the current for lighting the display and operating the appliances when required, while the members of the association attend to the cleaning of the window, setting up the exhibits, etc.

This arrangement enables the central station to keep before the public the idea of doing it electrically, and the general manager, H. B. Zimmerman, recommends the plan for any company not engaged in merchandising. The chairman of the Association is W. H. Knapp, Joint Committee correspondent in Jamestown.

Chicago recently held its first electric home exhibit in the Beverly Hills



A. Penn Denton of Kansas City, Mo., is Chairman of the Code Committee of the A. E. I.

section of the city. The home was open for one month and during that time more than 40,000 visitors were shown that "electricity saves more than it costs." People from all parts of Illinois and surrounding states visited the home and hundreds of inquiries have resulted.

The Mississippi River Power Company, which operates the hydroelectric plant at Keokuk, Iowa, has offered as its contribution to the educational plan to "Electrify America" to equip completely with all electrical devices the domestic science department of the high school there. This plan is one that could well be adopted in every city because of its value in educating the coming home makers to the advantages of using electricity.

The employees of the British Columbia Electric Railway Company, Ltd., Vancouver, have started the organization of an Electrify Club, and blanks have been distributed to be filled out. A score of fifty or more will qualify any one for membership.

Dr. Thomas Addison Retires

Dr. Thomas Addison, often called the father of the electrical industry in the west, has retired at his own request as Pacific Coast manager of the General Electric Company, and will be succeeded by J. A. Cranston, formerly north-western manager.

Dr. Addison has been with the company for thirty three years, and has held his present position since 1892. He was born in Courtland, Michigan, and was graduated from Bellevue Medical College with the class of 1877.

In 1885 he forsook his profession to take employment with the United States Electrical Company of Chicago, and in 1888 he accepted a position as apparatus salesman with the Thompson Houston Company at that city. When the western branch of the company was reorganized in 1890 he was selected to go to San Francisco as local manager. Two years later he became Pacific Coast manager of the General Electric Company.

Concentrated Publicity

Just about the biggest thing in publicity ever pulled off at one place in the electrical line, has been taking place in Greater New York during the past two months. This is the story:

A far sighted electrical inventor

brought to light a new appliance for cooking. His idea was to establish a happy medium between the electric grill and the electric range. After accomplishing his purpose, he discovered that his electric cooker also comprised all the elements of a fireless cooker—a combination that would fulfill every desire of the housewife.

S. E. Kimball, representing the Apex Electrical Manufacturing Company of Cleveland in New York City, upon learning that this company had taken over the new invention, conceived the idea of starting a big sales campaign for it in his territory. It is well known that when Sam Kimball undertakes to do a thing the job is as good as done.

Mr. Kimball gathered together his forces and started in on a real job of publicity. He demonstrated to the several power companies of the city how the new cooker—appropriately named the Kook-Rite—could be made to cook the food for every inhabitant of the big city. He convinced them to the extent of their appropriating a sum for local newspaper advertising that runs up into a big row of figures.

In addition to this all the companies conducted direct mail campaigns, sending out hundreds of thousands of folders and circulars. Also they dressed their windows with the new cooking device, displaying only the Kook-Rite itself and the equipment that accompanies it. Mr. Kimball found it difficult in some instances to keep them from overloading the window with all the other appliances stocked.

Then came the reading notice pub-



W. Creighton Peet of New York City is Chairman of the A. E. I. Trade Policy Committee

licity which included every argument that would favor the use of new kitchen appliance. New York City and suburban newspapers seemed to be competing with each other in devoting space to the campaign.

It has been Mr. Kimball's aim to bring the contractor-dealer into this big sales campaign. Being an electragist himself, his sympathies are with that group. But he says that the average contractor-dealer is too busy figuring out a plan to cover himself on a wiring job taken at too low a figure to take advantage of a selling plan that might make him more real money in a month than his other business would in a year. However, a number of electragists have grasped the opportunity, and are tying in with the cooker campaign.

As to the appliance itself, Mr. Kimball says that it will do everything that any kind of a stove will do—coal, gas, oil, or electric—and do it better and more economically. And to hear him praise the Kook-Rite device, is equal to a practical demonstration of its merits.

N. E. L. A. Plans Future Work

Standing Committee Chairmen Appointed at Executive Sessions

Budgets for geographic division and national activities were discussed and approved at a meeting of the national executive committee of the National Electric Light Association at headquarters Friday, August 31st. Details of the program for the present administrative year were outlined and the program unanimously adopted at this meeting and at a meeting of the public relations national section executive committee, held at headquarters Thursday, August 30th.

One of the most important features of the program will be a national service survey such as was proposed at the June convention in New York City. This survey will be conducted along lines to be determined by a committee which will work out several optional plans.

President Walter H. Johnson announced that he had appointed all committee chairmen and that all committees are actively at work. He requested and received approval of his appointments of committee chairmen as follows:

Charles A. Coffin Prize Committee—Chairman, Walter H. Johnson, The Philadelphia Electric Co., Phila., Pa.; Class C Membership Applications Committee—Chairman, Walter Neumuller, The New York Edison Co., New York City; Constitution and By-Laws Commit-

tee—Chairman, W. C. L. Eglin, The Philadelphia Electric Co., Phila., Pa.; Customer Ownership Committee—Chairman, Milan R. Bump, Henry L. Doherty & Co., New York City; Doherty & Billings Prize Awards Committee—Chairman, A. S. Loizeaux, Consolidated Gas, Electric Light & Power Co., Baltimore, Md.; Electrical Resources of the Nation Committee—Chairman, M. S. Sloan, Brooklyn Edison Co., New York City; Electrification of Steam Railroads Committee—L. A. Ferguson (Chairman), Commonwealth Edison Co., Chicago, Ill.; Education Committee—(This Committee is elected annually by Class D members); Finance Committee—Chairman, Joseph B. McCall, The Philadelphia Electric Co., Phila., Pa.; Insurance Committee—Chairman, Charles B. Scott, Bureau of Safety, Chicago, Ill.; Lamp Committee—Chairman, Frank W. Smith, The United Electric Light & Power Co., New York City; Public Policy Committee—Chairman, Martin J. Insull, Middle West Utilities Co., Chicago, Ill.; Rate Research Committee—Chairman, Alex Dow, The Detroit Edison Co., Detroit, Mich.; Water Power Development Committee—Chairman, Franklin T. Griffith, Portland Railway Light & Pr. Co., Portland, Ore.; Accident Prevention Committee—Chairman, Charles B. Scott, Bureau of Safety, Chicago, Ill.; Company Employees Organizations Committee—Chairman, T. G. Spates, New York & Queens Electric Light & Pr. Co., Long Island City, New York; Educational Committee—Chairman, Fred R. Jenkins, Commonwealth Edison Co., Chicago, Ill.; Membership Committee—Chairman, Howard K. Mohr, The Philadelphia Electric Co., Philadelphia, Pa.; Rural Electric Service Committee (formerly "Rural Lines Committee"—Chairman, G. C. Neff, Wisconsin Power, Light & Heat Co., Madison, Wis.; Wiring Committee—Chairman, R. S. Hale, The Edison Electric Illuminating Co., Boston, Mass.; Chamber of Commerce of the United States of America—National Councillor, John W. Lieb, The New York Eddison Co., New York City. (The Alternate National Councillor and the eight delegates will be the same as last year, except President Johnson becomes the Ex Officio member); Committee on Electricity and Its Relation to Agriculture—G. C. Neff was authorized to appoint the following persons who served last year: Arthur Huntington, Iowa Railway and Light Co., Cedar Rapids, Iowa; J. C. Martin, 1570 Old Colony Building, Chicago, Ill.; G. C. Neff, Wisconsin Power, Light and Heat Co., Madison, Wis., and Marshall E. Sampson, Central Illinois Public Service Co., Chicago, Ill.; Contact Committee, Department of Commerce—Chairman, General George H. Harries, H. M. Byllesby & Co., Chicago, Ill. (Appointment was also tendered to the other ten persons who served in similar capacity last year.); National Industrial Conference Board—Chairman, John W. Lieb, The New York Edison Co., New York City; Eastern Seaboard Power Supply Survey Advisory Board, United States Department of the Interior. The two N. E. L. A. representatives are Messrs. Charles L. Edgar, The Edison Electric Illuminating Co., Boston, Mass., and M. S. Sloan, Brooklyn Edison Co., Inc., Brooklyn, New York.

Attendance at the national executive committee meeting was exceptional, representatives being present from all but one geographic division. These representatives of the geographic divisions stated without exception that conditions in the electrical industry are excellent; in fact, that the industry is enjoying a period of growth and prosperity unequalled in its history.

The meeting of the public relations national section executive committee also was well attended. The program outlined calls for a continued activity on the part of all committees of the section, and increased activities with respect to work with employees and coöperative work with other associations, institutions and industries.

Power Club to Meet

The fall meeting of the Electric Power Club will be held at the French Lick Springs Hotel, French Lick, Indiana, November 19 to 22. According to S. N. Clarkson, executive secretary, an unusually interesting program is being prepared, one that will prove valuable to the members of all branches of the electrical industry who attend.

Jobbers Merge

The interests of the Satterlee Electric Company of Kansas City and the Columbian Electrical Company of St. Joseph, Missouri, were merged as of September 1, to be known by the latter name in the future. A wholesale electrical supply business will be carried on in the four story building at 1717 Walnut Street, Kansas City. The retail department of the Satterlee company has been sold to James W. West and will be operated as the West Electric Company.

The officers of the new organization are: President, W. B. Satterlee; vice president and treasurer, W. S. Blue;



Arthur L. Abbott, Who Has Resumed His Work as Chairman of the Cost Data Committee of the Association of Electragists, Was Recently Appointed Sales Manager of the Frank Adam Electric Co., St. Louis

and secretary, W. A. Satterlee. W. B. Satterlee started in the electrical supply business twelve years ago in a small



Wm. B. Satterlee Walter S. Blue

way but increased the business until his company occupied 20,000 square feet of space. Mr. Blue was general manager of the Columbian company for six years and is well known by purchasers of electrical goods throughout the Kansas City territory.

Electric Mail by Airplane

Morning papers and important mail were delivered by airplane to the two hundred members of the General Electric sales conference which gathered at Camp Lovejoy, Association Island, Lake Ontario, during the week of September 3. The flight was made from Schenectady on Wednesday, September 5.

This is the first time the General Electric Company has used an airplane as a special despatch carrier, or for transportation of any nature, and it is the first time a landing of this kind has been made on Association Island. Parade grounds there form an ideal landing place for the machine. The airline distance from Schenectady is one hundred thirty two miles, which was covered in about two hours, a saving of five hours over the time required for railroad transportation.

First to greet the pilot was Frank H. Gale, advertising manager of the General Electric Company, who acted as camp manager. Upon receipt of the pouch he made immediate delivery of the letters and papers, the first recipient being President Gerard Swope, followed by the vice presidents and others. Everyone received mail and there were newspapers for all who wanted them.

Preliminary arrangements for the flight were not divulged and first news of the trip reached the conference when one of the campers noticed the airplane circling at a height of about one thousand feet above the island.



A Mere Detail for The Better Contractor



The Better Contractor pays attention to mere details, knowing that wherever the owner may turn he will find evidence of thoughtful selection of Electrical Material by the contractor.

This far-sightedness of the Contractor may escape notice for years, yet, as the newness wears off and value shows through, permanence and durability mark his material and his work.

When the owner has opportunity to recommend the Better Contractor—competition fades and profits increase.

P & S Porcelain

The Better Contractor, instinctively selects durable materials and confirms our choice of Porcelain for Convenience Receptacles. Porcelain is solid and firm; the slots are always clean and the glazed surface will not scratch, mar or crumble.

A Mere Detail

A mere detail, perhaps, is the unique design of the T-SLOT feature. The blades readily find the deep smooth channel between the T-SLOTS and slip into place instantly.

In the Better Homes

The natural longing for better homes finds echo in the selection of durable material—not for today—but for the future.

We are confident of your favorable decision to employ P & S Convenience Receptacles in your work.



The blades readily find the deep smooth channel and slip into place instantly.

Ask the Better Jobbers

PASS & SEYMOUR, Inc., SOLVAY, N. Y.



M. C. Fitzgerald, Traffic Manager of the General Electric Company, Handing the Mail Pouch to the Airplane Pilot Just Before the Flight

Steinmetz in Denver

Dr. Charles P. Steinmetz, chief consulting engineer of the General Electric Company, was the principal speaker at the joint meeting of the Denver section of the American Institute of Electrical Engineers and the Rocky Mountain Division of the N. E. L. A., held at the Municipal Auditorium of that city, September 4.

Tulsa Wedding Party

All Tulsa was agog when M. O. Mason, sales manager of the Dodge Electric Company of that city, was recently married to one of the prettiest dames in that fair Oklahoma city. "But what has he done, sergeant?" timidly inquired his blushing bride as the electragerist was being questioned at the police station where he had been taken in a patrol wagon as a good joke by friends who were on a charivari party.

"Well, lady," replied the sergeant—but he never had a chance to explain further, for the pair were suddenly whisked out of the side door of the station into a big red car that had just pulled up, while more than two hundred friends of Mason stood outside and looked on in amazement at this change in affairs.

But soon the big red car was driven into the fire station, and Cupid's trouble man, the fire chief, stepped out and explained that the couple were back home. Whereupon the police station and the fire department were amply supplied with cigars, and by none other than the newly weds themselves.

News Notes Concerning Electrical Contractor-Dealers

Business Changes, Store Improvements, and New Establishments Opened

Birney Electric Company is reported to have opened an electrical supply store at 119 East Michigan Avenue Lansing, Michigan. Formerly located at 119 West Michigan Avenue, Michigan.

Miller Weaver Electric Company has established headquarters at 4 Arcade Building, Dayton, Ohio, where an extensive line of electrical supplies will be handled. Incorporated capital, \$10,000. Incorporators: F. T. Arrill and others.

Davenport and Warner, formerly located at 124 East Genesee Street, Syracuse, New York, have moved to 1921 South Avenue, Syracuse, where a complete line of electrical supplies and fixtures will be carried.

The Electric Service Shop is open for business at 5733 West Chicago Avenue, Chicago, Illinois. Electrical appliances will be featured.

Electric and Radio Sales Company has established headquarters at Norristown, Pennsylvania.

Electrical Art Shop will conduct an electrical supply business at Glens Falls, New York. Incorporated capital, \$10,000. Incorporators: Attorney D. F. Inrie, Glens Falls and others.

Perkins Electric Company, in the electrical supply business at 921 Locust Street, Des Moines, Iowa, will move to 910 Locust Street, Des Moines.

Nager Electric Company of which J. Nager, 79 South Second Street, Brooklyn, New York, and others are incorporators, is open for business. Incorporated capital, \$10,000.

Norwalk Electric Company will conduct an electrical supply business at Norwalk, California. Estimate worth of concern, \$12,000.

Nelco Electric Company, Incorporated, has established headquarters at 107 Main Street, Jamestown, New York. Electrical supplies and appliances will be featured. Incorporated capital, \$10,000. Incorporators: C. W. Herrick, president, 518 Pine Street, Jamestown, and others.



Although Dr. Steinmetz Always Combines Work With Pleasure He is an Enthusiastic Lover of Nature and Often Goes Canoeing on the Mohawk River Near the General Electric Works at Schenectady

NOARK SERVICE BOXES

*More durable
than steel*



Their cast iron construction resists rough handling and corrosion better than steel. Investigate these handy, approved combination cut-outs and safety switches.



Fuses
Clips
Cutout Bases
Service Boxes
N.E.C. Standard



The Johns-Pratt Company

Hartford, Conn., U. S. A.

BOSTON (9) CHICAGO CLEVELAND NEW YORK PHILADELPHIA PITTSBURGH ST. LOUIS SAN FRANCISCO
161 Summer St. 35 So. Desplaines St. 1365 Ontario St. 41 East 42nd St. 22 So. 15th St. 104 Sixth St. 314 N. Broadway 74 New Montgomery St.
32-3320-25
EXPORT DEPARTMENT, 30 Church Street, New York, N. Y., U. S. A.

Hanson Electric Company, an old established concern, will conduct an electrical supply business at Green Bay, Wisconsin.

Fixturelier Corporation of which Attorneys Drechsler, Orenstein and Leff, 225 Fifth Avenue, New York City, are incorporators, will feature an extensive line of electrical supplies. Incorporated capital, \$20,000.

North Coast Electric Company will remodel electrical supply store at 206 Third Street, Seattle, Washington. Extensive improvements will be made.

Niagara Electric Supply Company is open for business at Niagara Falls, New York. Incorporated capital, \$20,000. Incorporators: Attorneys Moore and Killian, Gluck Building, Niagara Falls, and others.

Gregg and Reed, in the electrical supply business at Tipton, Indiana, will enlarge stock to accommodate increasing business.

Reilly Electric Company, Incorporated, has established headquarters at 24 South Ludlow Street, Dayton, Ohio, where a complete line of electrical supplies will be carried. Incorporated capital, \$30,000. Incorporators: D. G. Reilly and others.

Thompson Brothers, successors to the United Electric Service Company, will continue to conduct electrical supply business at Caryl Block, Main Street, Palmer, Massachusetts. Harry Thompson, local manager.

Keystone Electrical Construction Company is locating at 808 Broadway, Camden, New Jersey, where a complete line of electrical fixtures, supplies and appliances will be handled. Formerly at 562 Line Street, Camden.

Kapneck Electrical Fixture Company has established headquarters at 717 Twelfth Street, N. W., Washington, D. C. Incorporated capital, \$50,000. Incorporators: Henry Kapneck and others.

C. & R. Electric Shops, Incorporated, will feature an extensive line of electrical supplies at Los Angeles, California. Incorporated capital, \$50,000. Incorporators: Attorney G. R. Dexter, C. P. Broughton and others.

Roland Electric Company has opened a new store at 3321 East Davison Avenue, Detroit, Michigan.

Snyder Electric Company will conduct an electrical supply business at 125 Henry Street, Cumberland, Maryland. Incorporated capital, \$50,000. Incorporators: D. P. Snyder and others.

Baker Avenue Electric Company is establishing headquarters at 909 Baker Avenue, Bell, California, where an electrical supply and contracting business will be conducted. Estimate worth of concern, \$50,000. In market for electrical supplies and fixtures.

L. D. Cornell has opened an electrical supply store at 64 Hudson Avenue, Albany, New York.

Sno-Mon Electric Company has established headquarters at Snohomish, Washington. Incorporated capital, \$100,000. Incorporators: T. N. Bennett and others. In market for electrical merchandise.

Waterloo Electrical Supply Company, an old established concern, will conduct an electrical supply business at Waterloo, Iowa. Incorporated capital, \$100,000.

The Seitz Electric Company, in business at 120 Randall Avenue, Evansville, Indiana, will open branch store at 1914 Riverside Avenue, Evansville.

Tennessee Electric Power Company will feature an extensive line of electrical supplies at new headquarters located at A Street, Lenoir City, Tennessee. Estimate worth of concern, \$100,000. In market for electrical supplies and machines.

William P. Boyer, electrical contractor, announces the opening of a new store at 812 Thirteenth Street, N. W., Washington, D. C., where an up to date line of merchandise will be carried.

Frank A. Dallan will open an electrical supply store at Broadway and Somerset Streets, Gloucester City, New York.

Arthur H. Bennett is locating at 1084 Chalkstone Avenue, Providence, Rhode Island, where a full line of electrical fixtures and appliances will be carried. Formerly at 47 Harvest Street, Providence.

Condensed Notes of Interest to the Trade

The Hart & Hegeman Manufacturing Company of Hartford, Conn., has acquired the entire capital stock of the H. T. Paiste Company of Philadelphia, its selling agents for the past ten years, and the firms will be operated as one.

The F. W. Wakefield Brass Company of Vermilion, Ohio, will hereafter equip its Red Spot line of commercial lighting hangers with an original type of safety chain of No. 5 gauge solid brass.

Announcement of a reduction in price of its two way plugs, affecting two old standbys and one of a new series, has been made by the Benjamin Electric Mfg. Co. of Chicago.

Payment has been announced by the General Electric Company of 5 percent supplementary compensation for continuous service to all employees of the company receiving \$4,000 or less per year who had completed five years or more of continuous service on June 30 last.

"For Business Men and Bankers to Think About" is the keynote of a message recently sent to the trade by the AA Wire Company of New York City through the courtesy of the Curtis Publishing Company, setting forth words of optimism in regard to the business situation of the country.

A catalog and an advertising folder on its new Sol-Lux luminaire for commercial lighting have been issued by the Westinghouse Company.

September 15 was the time set for deliveries on the new Universal Service Switch manufactured by the Johns-Pratt Company of Hartford, Conn., which has been produced in the interest of standardization of switches for central station service entrances.

Removal on October 1st of the general sales offices of the supply department of the Western Electric Company of New York City to the Pershing Square Building was recently announced. Herbert Metz is appointed advertising manager of this department and P. L. Thompson continues as publicity director of the company.

A 34 page catalog has been issued by the Holophane Glass Company of New York City setting forth its commercial line of reflectors and fittings.

The McPhilben Lighting Fixture Company of Queens, N. Y., has issued a beautifully illustrated 64 page catalog showing the latest models, designs and finishes in residential lighting fixtures. Upon request these catalogs will be mailed to electragists.

The Trico Fuse Mfg. Company, Milwaukee, Wis., announces a reduction in the price of its line of renewable fuses.

Recent catalogs issued by the Reliance Electric & Engineering Co., Cleveland, set forth its line of induction and adjustable speed motors.

A unique counter and window display is being distributed to the trade by the Liberty Gauge & Instrument Company of Cleveland.

How the S. E. D. Helps ELECTRAGISTS Build Better Lighting Business

Do you draw ALL your income from lighting activities?

Do you draw PART of your income from lighting activities?

If you do, you will derive tremendous benefits from S. E. D. Membership on the money-saving, joint-membership plan with the Association of Electragists—International.

The Society for Electrical Development has done a great amount of business trail-blazing work. It has studied market possibilities for increasing and improving lighting in home, in store and in factory. It has collected valuable data, convincing facts and has boiled them down into campaigns which can be taken up with profit by both large and small organizations.

These campaigns which include:

1. BUILDING RESIDENCE LIGHTING BUSINESS
2. BUILDING STORE LIGHTING BUSINESS

have not only been completely treated from the angles of potential markets, sales methods to employ, etc., but finished advertising series, typographic layouts, stereos, mats, sales letters, attractive consumer pieces and other effective material are available for instant use.

Join the S. E. D.—get this material—and start one of these big, promising lighting activities. Hundreds of concerns are planning to profit in just this way. The joint-membership arrangement mentioned above will bring you these business building campaigns which are **merely a fraction** of the complete service supplied to its members by the S. E. D.



Ask for Full Details of the Society's Special Program Planned to Increase Lighting Business, and Further Information on the FULL Benefits ELECTRAGISTS Derive from S. E. D. Membership.



"DO IT ELECTRICALLY"

Use This Coupon

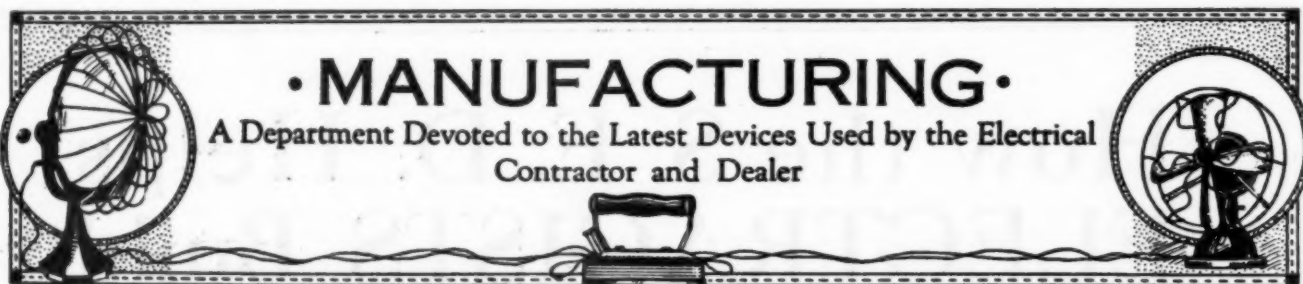
Send It In Now!

Association of the Electragists, (International)
15 West 37th Street, New York, N. Y.
Gentlemen:

I am interested in learning full details about the joint-membership plan with The Society for Electrical Development, Inc., and the extremely low rates prevailing for ELECTRAGISTS.

Individual _____ Company _____

Street & No. _____ City _____ State _____



New Cooking Unit

A new cooking unit which has been placed on the market by the Apex Electrical Manufacturing Co. of Cleveland is known as the Kook-Rite. In appearance it resembles a fireless cooker and its cooking qualities are of such a nature that it is said they combine the quick, hot heat of the gas stove, the clean heat of the electric stove, and the stored undissipated heat of the fireless cooker.

Underneath the bottom of the oven or well is an electric heater. At the



top, fastened to the cover is another heater. Either or both can be used as the occasion demands. On the front is the timer, which shuts off the electric current after it has been on for a predetermined time.

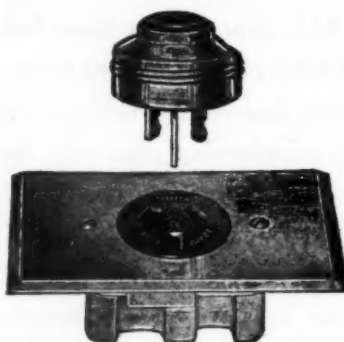
The electric heaters convert an exact amount of electricity into heat as long as they are on. This heat is stored in the oven, which results in measured heat. The timer allows the current to remain on for just the number of minutes it is set for and then turns it off, which gives measured time.

The combination of measured heat and measured time is what makes the Kook-Rite so effective—the efficient, quick, cook way of cooking food, it is said.

New Wiring Devices

Recent developments of Harvey Hubbell, Inc., Bridgeport, Conn., include the following wiring devices: A Polarized Composition Attachment Plug which by providing a cap with one wide

and one narrow blade will fit only in the corresponding slots in the plug base, suitable for domestic or heavy



duty. A Composition Motor Plug with Knostrain Bushing was especially designed for attaching to motor driven apparatus, the base being fitted with male contacts and the body with concealed contacts and crown top Knostrain bushing, thus relieving strain on the binding screws.



Designed especially for three wire work is a porcelain Flush Receptacle with metal stamped plate, brass covered polarized cap, 20 ampere capacity. Two new Porcelain Receptacles, designed for 3 1/4 and four inch outlet boxes respectively, are made with grooves to accom-



modate shade holders. The new Detachable Acorn for Pull Chains, now supplied on all standard Hubbell Pull Sockets, is very easy to attach and detach, and is neat in appearance. The small clip holder fits over the head of the chain as shown, gripping it securely.

New Lighting Units

A new production of the Peerless Light Company of Chicago is known as the Peerlite, a commercial unit suited

for stores, shops, banks, offices, garages, factories, public buildings and the kitchen. The globe is of snow white glass, beautiful in design, and so con-



structed as to eliminate eyespot and glare but giving the maximum of light on the working plane.

Another Peerlite unit is a twin light candelabrum, designed for the boudoir,



buffet, mantel or console. Its height is 14 1/2 inches, spread 7 inches, furnished with two pull chain sockets and candles, and it comes in two finishes, silver and black, and gold and black. A



third unit is the Candle Statue night light with classic base, push through socket, and can be used with round bulb or candle shaped bulb as illustrated. Furnished in ivory brown, blue or pink.

Which?

SHALLO or SHALLOW

What might be shallow to an ocean liner would be quite deep enough for a canoe. Hence the word shallow might mean most any depth.

SHALLO, the name coined by the Arrow Electric Company, designates a complete line of flush devices with a definite limited dimension, one inch or less. This line contains every wall device that is desired, including the new single and duplex Convenience outlets for flush plates with or without doors, push button switches in single pole, double pole, three and four point with or without luminous button or lock, and Tumbler switches in the four styles with or without the Arrow "Glow-Tip". For your fall business you can save time and bother by using the "Shallo" line which is complete in all styles and is limited to one inch or less.

The Arrow Electric Company
HARTFORD, CONNECTICUT, U. S. A.

SHALLO MEANS

 **ARROW**

The complete line of Wiring Devices.

New Oven Toaster

A new and improved electric toaster known as the Universal Oven Toaster has been placed on the market by Landers, Frary & Clark of New Britain, Conn. It is made in the form of a miniature oven, boxed in on all four sides to retain the heat.

A feature of this toaster is that the bread is toasted on both sides at once, and the bread rack may easily be pulled out or slid in by a convenient handle. Another feature is the way in which the toast crumbs are caught in the sliding rack instead of falling on and soiling the table cloth.

The Universal Oven Toaster is easily cleaned. It is attractive in appearance and efficient in operation. It has highly polished nickel finish and ebonized handles and feet. Furnished complete with cord and plug.

New Heater Switches

A complete line of Reciprocating Heater Switches has been placed on the market by The Arrow Electric Company of Hartford, Conn. Every detail of the manufacture of these units has been carefully supervised to give the best possible service. A free catalog illustrates and describes these switches, and in addition this company also announces the issuance of a new catalog on its complete line of wiring devices.

Regulating Portable Lamp

The Turnlo Portable Electric Lamp, manufactured and marketed by W. A. Harvey of Scranton, Pa., is used for the boudoir, nursery, bathroom, hall, sick room, or any other place where dimming may be desirable. Five changes of light may be obtained by the press of a button.

The height of the Turnlo with shade set in position is fifteen inches. Its mechanical construction is strong and substantial, and the pedestal is of metal, artistically designed, and of a handsome finish. The shade, which is of silk and innerlined with silk, is eight inches in diameter at the bottom and five inches in height, and is provided with a simple and substantial spring clamping device to slip on the top of the bulb.

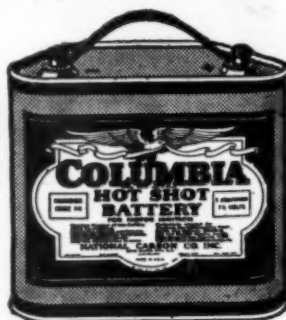
The maximum size of bulb to use in this lamp is 40 watts. A bulb of smaller capacity can of course be used. It is regularly furnished is adapted for use on either direct or alternating current

110 volt systems, although it can be furnished at a slight advance in price for use on 32 volt farm lighting systems.

New Size Batteries

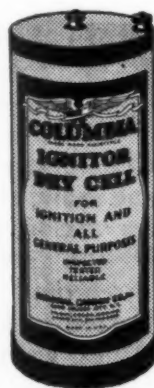
The National Carbon Co., Inc., of Long Island City, N. Y., has announced two new types of Columbia Hot Shot batteries of the steel case construction, as follows:

No. 1562 M, 5 cells in series arranged in two rows giving 7 1/2 volts.



No. 1662 M, 6 cells in series arranged in two rows giving 9 volts.

These two new batteries have the same design and appearance as the 1461 M Columbia Hot Shot Battery—4 cell power, 6 volts—which was announced to the trade last fall. With these new



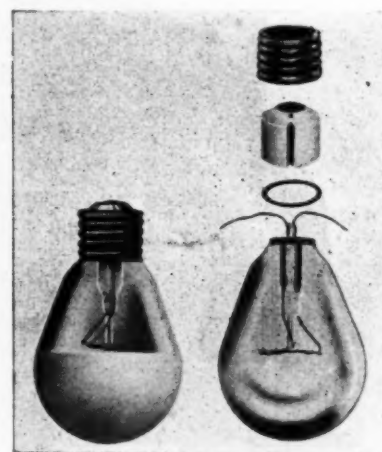
types of steel case batteries it is now possible to meet the requirements of practically every dry battery ignition system.

For many years the trade has been familiar with the red and white color design of the Columbia Ignitor. Since the advent of the Columbia Hot Shot Battery in its attractive lithographed steel case, however, the National Carbon Co., Inc., felt it desirable to so change the color scheme of the Columbia Ignitor that it will be comparable with their Hot Shot in both color and design. The colors of the new jacket are gray, red and blue—similar in all essential details to the Hot Shot colors.

Theft Proof Bulb

The Kulp Theft Proof Electric Bulb recently placed on the market by Lester Kulp of Chicago is designed to prevent loss from stealing. The idea of it is simple. There are no guards, locks, keys, springs, or other mechanisms. It is a standard lamp in every way and fits into any standard socket. It is complete in itself and looks and is used exactly the same as any ordinary lamp. The bulb is to be retailed at standard prices.

The illustration shows how the unusual advantages are obtained. One



contact is at the top just as in an ordinary lamp. The other contact is a brass ring, fastened at the bottom of a porcelain plug. This plug has a groove which is filled with plaster of paris, lightly holding the brass shell in place. After the lamp is screwed into the socket, an extra turn breaks the plaster of paris seal, so that the lamp can turn freely in the shell, always maintaining electrical contact. The shell, however, cannot be turned in the socket. The shell being spun over the ring, screws up so close to the socket that fingers or tools cannot grasp it. Thus the lamp positively cannot be stolen or even broken in the attempt to steal it, thus preventing endangering circuits.

When the bulb is burned out, it can easily be removed for replacement. The bulbs come in any standard size, voltage or wattage.

J. D. Phillips has been appointed office manager of the new Oakland, California, plant of the General Electric Company. W. M. Stearns and N. R. Birge have been appointed assistant managers of the supply department of the company at Schenectady.

HUBBELL

Electrically Welded Lamp Guards with thief-proof lock

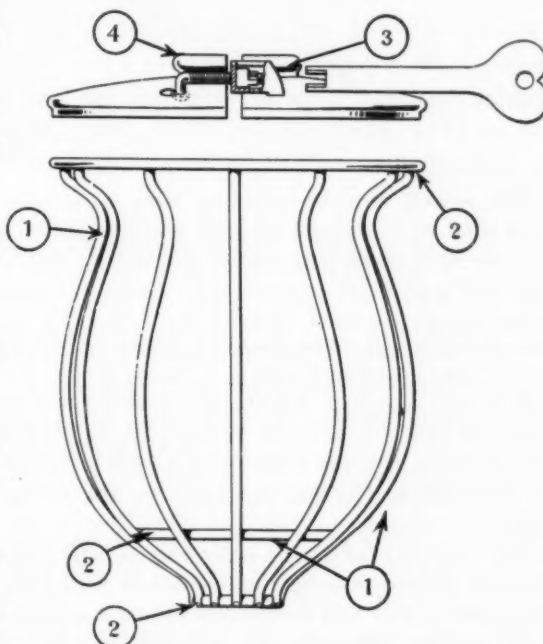
Every industrial plant should use HUBBELL LAMP GUARDS, and here are some of the reasons—

1. MADE OF EXTRA HEAVY STEEL WIRE to withstand hard blows.
2. Each Guard HEAVILY TIN COATED to prevent rusting.
3. ELECTRICALLY WELDED where wires cross. No solder used.
4. THIEF-PROOF LOCK operated by a special key.

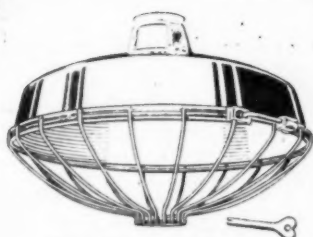
Made for both BRASS SHELL AND PORCELAIN SOCKETS.

All Guards are packed NESTED, taking up less than 25 per cent. of the space required by other makes.

We also make a complete line of plain lamp guards without the locking feature.



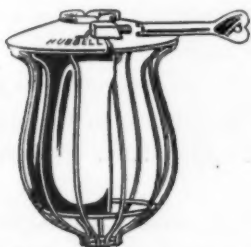
***One Lamp Saved
will pay for
the Guard!***



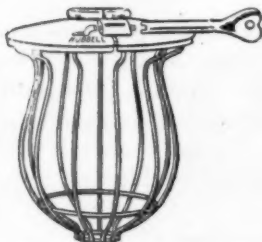
Type No. 6653. Fits bottom of R L M Reflector. Seven sizes from 10 to 18 inches.



Type No. 6650. Locking lamp guard for Parabola reflector.



Type No. 5764. Locking lamp guard with side reflector for brass-shell sockets.



Type No. 5685. Locking lamp guard for brass-shell sockets. A similar type, No. 5730 for porcelain and water-proof sockets, also offered.

HARVEY HUBBELL INC
ELECTRICAL WIRING DEVICES
BRIDGEPORT  CONN. U.S.A.



ELECTRICAL WIRING DEVICES

Radio Service was begun in June, 1922, as a supplement to *The Electragist*. It is now issued as part of the magazine.

RADIO SERVICE

All Communications Should Be Addressed to
THE ELECTRAGIST RADIO SERVICE
15 West 37th Street, New York City.

The *Electragist*, formerly *Electrical Contractor*, was established 22 years ago as the official journal of the National Association.

OCTOBER, 1923

The 1924 Models

Fall is here and winter is coming. These two seasons are credited with being the best seasons for using radio equipment and consequently the best seasons for selling it. Doubting Thomases who are interested in radio but have hesitated about diving in are ready for the plunge. There can be no hesitance this year on account of any "radical" changes in radio equipment such as we heard from time to time during the past two years.

Recent price reductions in standard receiving equipment do not point to any further declines. In fact they seem to suggest a clearing out of the present stock for the new trade. Plans for the coming season are all oiled up and running smoothly at the factories and the 1924 models, if they could be called such, are already here. There is nothing radically new and nothing more in the wind.

The newest models have not been materially changed from what we have been working with the past year. There is some refinement in controls and some improvement on appearance and that is about all. Radio equipment is now being put on a quantity production basis with its resulting low overhead and consequent low prices. Sudden or radical changes would not be possible or economical.

With the assurance that the prices will not be any lower, that models of sets will not be changed, and that broadcasting programs for this winter will be far ahead of anything we have ever had before, can there be any excuse for slow sales?

The approach of the holiday season will certainly find factories behind in orders and retailers who have failed to stock wisely will find themselves minus a source of considerable profits, and radio fans will have to either do without the particular equipment they had wanted or else take what they can get.

The Theatre and Radio

The theatre, like some of its best known actors and actresses, appears to be temperamental. Not so many months ago some of the most prominent theatre owners and managers condemned radio roundly. Many performers were forbidden to even look at a radio transmitter and so great was the fear of competition that one great owner and producer of vaudeville instructed all of his managers to eliminate completely from all acts any radio songs or even the mention of radio.

Early in August, Marcus Loew, wealthy owner of a chain

of high class variety and motion picture theatres in the East, purchased a broadcasting station, WHN, for the exploiting of his own artists. This apparently is a complete change of heart and the result of his action is being watched from all corners with much interest.

There is no doubt that other theatrical magnates will follow Loew's lead. If they do, the radio fans will be given such a treat in fine programs as they never dreamed of a few years ago. The radio as a booster of box office receipts has proved itself to the satisfaction of many theatre managers and if there is considerable competition in this field, what more could radio fan or radio dealer ask?

Obtaining Better Reception

The summer just passed has been a good one for radio. Reception has been very much better on the whole than during any previous summer. This is perhaps largely due to the fact that both transmitting and sending apparatus has been improved.

Then too, radio fans expecting the very worst, were agreeably surprised when they found that things were a good deal better than they had even hoped for.

It is true that static is bothersome at times and that DX reception is limited, but there has been very little difficulty in getting good clear reception from stations within five hundred miles.

Dealers and jobbers have found business on the whole vastly superior to what it was the previous summer and if there should be a little less calamity howling next spring about static, danger from lightning, and a few other things, there should be a much smaller decline in the volume of business next summer.

The state of mind of the buying public is largely responsible for business conditions. And if the newspapers and magazines which the people read are filled with scare head rubbish, dealers can expect a drop in business.

The elimination of foolish and loose talk and the use of more facts will go far toward establishing radio on a year round basis.

Radio Making the World Small

It is very difficult in the case of a great catastrophe such as Japan recently suffered from, to estimate till long afterwards just what damage was done. At the present writing it would seem that the loss of life and property damage is greater than that caused by any act of nature since the beginning of history.



Tungar

BATTERY CHARGER

General Electric Company
Merchandise Department
Bridgeport, Conn.

Three Months More

For three more months—just at the height of the so-called radio “season”, when favorable atmospheric conditions produce thousands of new radio set owners each month—Tungar advertising will appear in six of the leading papers reaching radio fans.

Tie-up posters, window trim material and other sales helps are available. Last season G-E factories were unable to supply the demand for Tungar Battery Chargers. Order now and have your stock for winter sales. Remember, too, that in winter Tungar is the automobile battery's best friend.

*The nearest G-E distributor can supply you
and furnish sales helps*

GENERAL ELECTRIC

To radio can be credited swift help in the form of food, clothing and medical help. When all other means of communication with the rest of the world failed, one lone radio station still in commission spelled out word by word a mixture of Japanese and English the terror and desolation caused by the upheaval of the earth's surface. Then other stations were repaired and more detailed news flashed.

Almost with the first news from the one lone station, relief ships started from various nearby ports and with the gradual realization of the enormity of the damage and suffering, funds were started all over the world and various forms of help started toward the Nipponese empire.

Without radio, days or perhaps weeks would have elapsed before the civilized world was told of the great disaster, and the loss of this precious time would doubtless have meant still greater suffering on the part of the helpless and homeless Japanese.

With wires down, cables broken, trains derailed and great ships thrown up on the beaches, the ether carried the message of horror and the cry for help.

Never in the future history of the world can any nation or part of a nation be put completely out of touch with the rest of the world. Even if many of the stations should be put out of commission, the chances are that some will still be usable and even if every station were knocked down, it would be possible to rig up a temporary station in a few hours.

The newest form of world wide communication has shown up exceedingly well under most trying conditions. It is scarcely possible for any act of nature to long leave any part of the world out of communication and certainly no enemy could completely cut off a nation from her friends.

Whether under the sea or above the clouds, man can still speak with his neighbors through the air.

Uncle Sam's New Dirigible

The very successful trial flights of the newest dirigible balloon of the United States Navy have proved very conclusively that radio is partly responsible for the fine records. The first two flights, one of which took the giant ship on a course over Asbury Park, New York, Newark, New Brunswick, Trenton and Philadelphia showed the means of communicating with the ground stations to be entirely up to requirements.

During a portion of the flight a heavy fog had set in and it was necessary for the commander to assure himself of the predicted weather conditions. There was not an instant's loss of time in getting this information from the League Island Navy Yard at Philadelphia. In fact during the entire time of the flights the ship was in communication with one or more naval stations.

Of course there is nothing new about communicating between airplane and earth stations but the radio equipment on the ZR 1 has been made very much more elaborate than on any previous aircraft unit. A special room aft of the control room is devoted to radio equipment and a gasoline engine is used to drive a generator for electric power.

Sending and receiving is possible over very much greater distances than on smaller aircraft where a storage battery has to be used as a power source. With the long range cruising capacity of the new dirigible, it is necessary that the radio equipment be enlarged accordingly.

Radio Fraud Schemes

Any successful business is bound to be pounced upon by some parasites who are bent solely on filling their own pockets with money and never a thought of the hereafter.

Already there have been in the radio field some fraudulent stock promotion schemes. There have been fake subscription agents for magazines that never existed and there have been alleged radio publications gotten out at the barest possible expense to pull the purse strings of trusting advertisers. Many fans have been making complaints about useless wiring diagrams and misinformation contained in these get rich quick schemes.

Then there are vacuum tube bootleggers, as they are called, manufacturing cheap imitation tubes with even the name and trademark of well known and reliable manufacturers stamped on them.

There is no cure for these things except unceasing vigilance on the part of everybody in the radio industry. Buy from reliable companies and sell reliable goods and in turn deserve the trust and praise of your customers.

Reception Dead Spots

It has been known for a long time that there are certain localities where it is either difficult or impossible to get good radio reception. Various explanations have been offered as to the reasons but so far every explainer seems to have a different reason.

In some cases the blame is laid on deposits of metal ores which are supposed to draw off the radio waves so that they cannot be picked up by an antenna. In other cases the contour of the land is held responsible.

A good deal of investigation is still to be made on various phases of radio work, and this is one subject that should be investigated soon. Many purchasers of receiving equipment are receiving little or no results, and when the trouble is discovered new markets for radio will be created.

Dead spots do not seem to be confined to the United States alone as reports come from England of receiving sets that were able to get WJZ when that station was located in Newark, but were unable to get Glasgow. Certain sections of northern New York and some spots in Canada have been noted as dead to radio reception. This interesting situation deserves some investigation and it cannot come too soon to suit the inhabitants of these unfortunate regions.

Skimming Their Own Cream

A rather odd development of the controversy between the Music Publishers' Association and the broadcasters is the formation of a music publishing company by station WLW, the Crosley Manufacturing Company, Cincinnati, Ohio. The publishing company was formed with the idea of encouraging the composition of music by local writers for broadcasting purposes, the music to be subsequently sold by the publishing company in various forms. One of the first compositions to be treated this way was "Somebody Else is Stealing My Sweetheart's Kisses." Although the only public rendition of this song was via radio from WLW, it is said that the demand for copies of the sheet music has surpassed all expectations.

This seems to flatly contradict the assertion of the publishers that radio has killed the sale of sheet music and phonograph records. All power to WLW and may some others follow its example.



An Armorclad Rheostat

Made for the UV199 tube and designed to completely eliminate comebacks from dissatisfied customers. Contains a 30 ohm resistance unit that

CAN'T BE HURT

One and a half inches in diameter and tough as a hickory nut. Invisible panel mounting.

Manufactured by

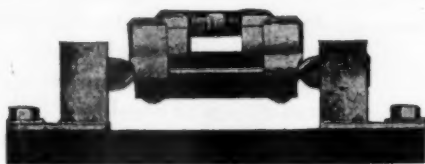
Martin-Copeland Company

PROVIDENCE, R. I.

"The House of Quality Radio Products"

THE SUREST SELLING FUSE REDUCER IN THE FIELD

Needed by Every Industrial Plant and
Contractor



Our line of Fuse Reducers has been going strong ever since we first announced it. It will pay you to go along with us

Let us show you the economy of using our Fuse Reducers to reduce fire hazards.

Attractive List Prices

Number	Volt	Amp.	*List Ea.	Carton
FR 263	250	60-30	\$0.90	18
FR 216	250	100-60	1.50	9
FR 221	250	200-100	2.00	9
FR 663	600	60-30	1.00	9
FR 616	600	100-60	1.75	9

Write today for full information

THE PLAINVILLE ELECTRICAL PRODUCTS CO.
PLAINVILLE, CONN.
SWITCH BOARDS—PANEL BOARDS

It Outlasts All Others

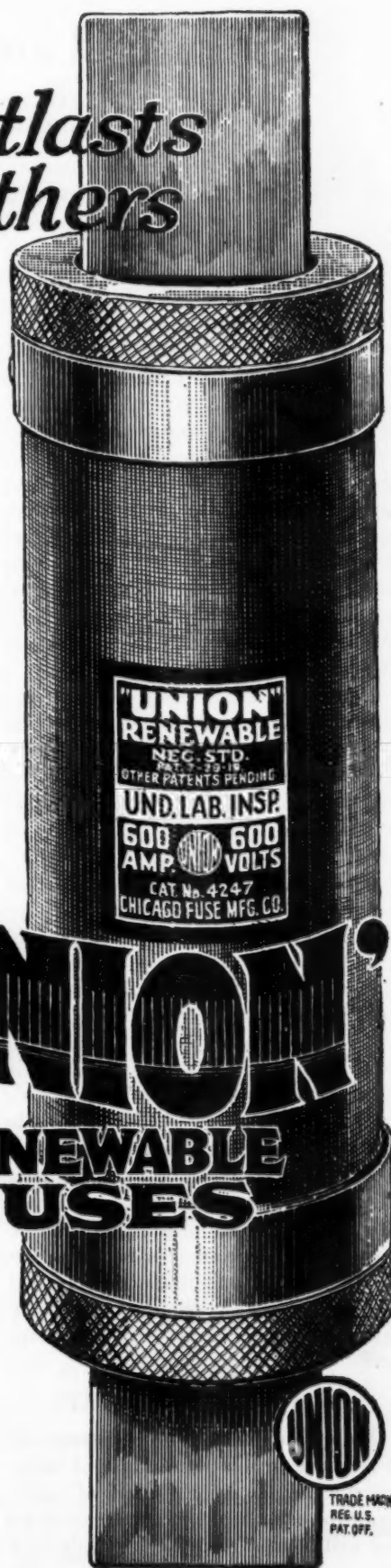
BECAUSE:

Heavier,
stronger,
more
fireproof.
Blows
without
flash or
violence.
Metal parts
won't corrode
and stick.
Easier to
renew.

'UNION'

RENEWABLE FUSES

The "Union"
saves more
than ANY
other renew-
able fuse.
Write for
catalog.



CHICAGO FUSE MFG. CO.

Manufacturers also of Switch and Outlet Boxes, Cut-out Bases,
Fuse Plugs, Fuse Wire and Automobile Fuses.

CHICAGO

NEW YORK

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

Selling Complete Radio Sets and Parts

The Two Classes of Customers Have to Be Handled Differently
and Electragists Should Know How to Approach Both of Them

Experience in selling radio merchandise has shown that there are two entirely different classes of buyers. One class buys radio sets. The other class buys parts to construct radio sets.

The people in the two classes are entirely different in many ways. As a rule, the buyer of parts knows something about radio. At times he knows a great deal and at other times he knows just enough to be "dangerous." On the other hand the buyer of a complete set knows very little about radio. He may know in a general way that there are broadcasting stations and that if he has a receiving set he will be able to hear the entertainment and other material broadcast. His education in the radio field does not generally extend beyond this point.

If the merchandising of radio equipment did not extend beyond the selling of complete sets, the dealer's life would be very easy, but on the other hand he would lose considerable of the profit to be made in selling the other class of goods.

It is therefore really necessary that the electragist who handles radio equipment prepare himself and his establishment to handle both classes of buyers.

The buyer of parts, as was stated before, knows something of radio. Some buyers of parts are really experts and some operate not only receiving stations but transmitting stations as well. These men will usually spend a considerable amount of money on radio parts in the course of a year and it is to the dealer's advantage to cultivate buyers of this kind. Other buyers of parts will not be so profitable, as they may be constructing very cheap and inefficient sets and may buy small amounts of inexpensive parts where they can get them the cheapest.

Make Inoffensive Inquiries

While there is little immediate profit to be made in this latter class of sales, nevertheless the proper kind of salesmanship can bring in future custom that will be worth while. It should be a rule of the house that inoffensive inquiries be made of all purchasers of parts as to what they intend to make with the parts.

Therein lies the opportunity for the salesman to advise the customer as to

whether he is going about the thing in the right way and whether the equipment can be expected to operate satisfactorily. Many beginners start in with an idea that they have picked up somewhere, and they spend a few dollars in parts, and when they get all hooked up they find they cannot get anything at all or their reception is so weak and unsatisfactory as to be practically useless.

Many very peculiar ideas get into the heads of some people who get the radio bug rather suddenly. They read a description of a simple crystal set that can be made by anyone at a cost of about \$8. Then they read an advertisement of a loud speaker which advertisement goes on to tell the convenience of having the whole family in on the entertainment at the same time, and said beginner right away fancies that with his \$8 crystal set and a \$30 loud speaker he is sure going to be some radio fan.

Then maybe he reads another advertisement of a loop antenna in which something is said about distance features. Well, he makes up his mind that he is going to have one of these things too. So he goes into a store with the idea that for about \$40 he is going to build himself a set that will operate a loud speaker and that he will be able to get all the stations in the United States and perhaps some of the ones in foreign countries.

Offering Advice

It is here that the electragist can step in and tell this newly arrived fan some of the things that he can do and some of the things he cannot do. Some people easily understand these things. Others seem to be a little slower in picking up the drift of the radio and electrical lines. If this newly arrived fan we are speaking about went to work on his transcontinental crystal set with loop antenna and loud speaker, it's a sure bet that he would be good and disgusted by the time he came to dope things out and try to get anything, even with head receivers.

For the same sum of money the radio salesman could sell the man a very satisfactory single tube set with head phones, antenna equipment and everything complete, and give him such ad-

vice that would enable him to receive broadcasting for anywhere from 300 to 800 miles.

Satisfaction with an outfit of this kind would naturally make him a good friend of the dealer from whom he bought the parts and equipment, and when it came time for him to enlarge the set to get greater distance or to add a loud speaker and a couple of stages of amplification, the dealer who favored him with the advice would most likely get the order for the additional equipment.

Every purchaser that comes into the store is a possible future purchaser. The man who buys radio parts is never finished buying them. As long as his interest holds, he is naturally going to try to improve his set from the point of getting more distant stations, better selectivity or the ability to operate a loud speaker. The real bug is never really satisfied with results and as soon as he adds one improvement, he is already planning some other improvement. It is the continual desire to improve reception that makes the radio parts selling business a very profitable part of the business.

Selling Complete Sets

The selling of complete radio sets requires salesmanship of a somewhat different kind. It is seldom that the salesman has to go into the subject of circuits or other highly technical points. The selling of a complete set involves a transaction of considerably greater magnitude than the selling of parts. But the purchaser, as a rule, is interested mainly in knowing in advance what he is going to get and what the set is going to cost him. He is assuming that the set will operate satisfactorily, and it is part of the salesman's duty to assure him of this. It is of course necessary to impress on the mind of the prospect that in order to give the greatest amount of satisfaction that it is necessary to have it properly set up. And right here is an opportunity to sell a service, that of installing the set.

It is seldom possible to sell this kind of service to the purchaser of parts, but it is quite often possible to sell it to the purchaser of complete receiving sets. The buyer of a complete set is mainly anxious to get the set operating, once



BUYING wiring devices with a name representative of true quality, honest worth and recognized serviceability—it is the basis of your successes.

Every STEEL CITY Product has an intangible STEEL CITY label—the label of a good name.

STEEL CITY means integrity of workmanship.

STEEL CITY means a guarantee of quality.

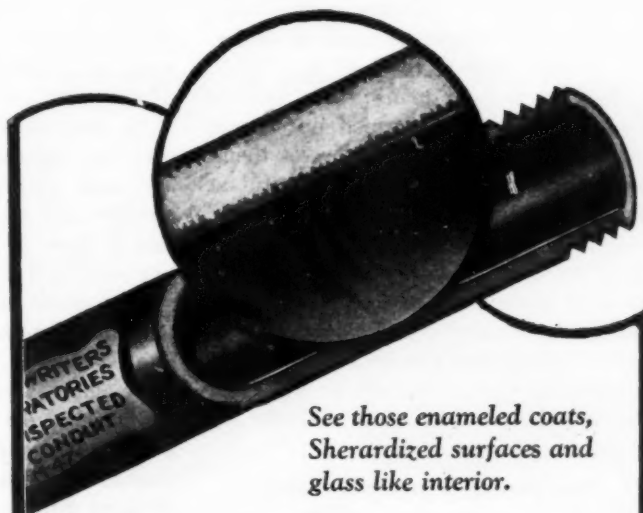
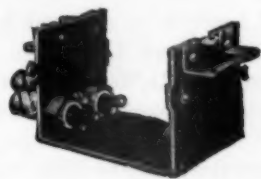
STEEL CITY means an economy of labor.

Those who know STEEL CITY instinctively associate the best there is in conduit fitting industry.

Write for our
Catalog No. 34-H



Steel City Electric Co.
PITTSBURGH PENNSYLVANIA



See those enameled coats,
Sherardized surfaces and
glass like interior.

Sherarduct for permanent wiring

¶ When you protect your wiring with Sherarduct Rigid Conduit, you can rest assured that the job's well done. For the non-corrosive zinc protection of Sherarduct is alloyed with the steel pipe on both inner and outer surfaces and in every clean, sharp thread.

Send for literature and prices

National Metal Molding Company

1353 FULTON BUILDING
PITTSBURGH

Represented in All Principal Cities

(23)



he has been sold on the advisability of buying it and there is no prospective joy to him in climbing ladders, boring holes through the window casement or soldering antenna wire to the lead in.

In fact a good many radio dealers find that when uninformed purchasers attempt to install the radio sets themselves, they are usually unsuccessful at first, place the blame on the set itself and look to the dealer to make good. Very often it has been found necessary to send a man out to find the trouble and fix it and this has to be done without cost. It is a free service that could be done away with if the dealer had sold the installation work along with the set in the beginning.

Interpreting Prospect's Needs

Finding out what the prospective purchaser wants is the hardest part of making any sale. Some people have a very hazy idea of what they want and others have absolutely no idea of prices and sometimes expect a great deal of apparatus for a very small amount of money. This subject can generally be handled diplomatically by a good salesman who will suggest a number of different selections which will produce various kinds of results and will slip in a price here and there so that the prospect gets some general idea of the relation of costs to results.

A good deal of slightly misleading advertising has been done in the past regarding the cost of sets. Advertisements stating that a certain set could be had for a certain price led the purchaser to believe that this was all he would be required to pay. Upon investigation he found that he would have to spend about \$15 to \$20 extra for antenna equipment and headpieces. It would be well for anyone selling radio equipment to plan out a convincing reply to such an objection because it is one that crops up quite regularly.

Some electragists have found that the people who buy parts and those who buy sets are so different that it is advisable to have separate departments to sell them in. This is a matter that is open to question and it depends a good deal on the size of the radio department. A very large establishment might find it well worth while to install such a plan, but a small department could never be operated successfully on account of the greater overhead expense and the larger amount of space required.

The salesman must have a thorough knowledge of the subject of radio in order to sell either class of buyers suc-

cessfully. The salesman may be called upon to say how many stages of audio frequency would be required to produce certain results and he may be asked whether it would be better to add a stage of radio or a stage of audio frequency.

He must be able to answer these and give his reasons in a convincing way and must also know enough about the circuits and operation of the complete sets to know what their range of reception will be with various types of antenna equipment and must be able to make recommendations as to the operation of loud speakers.

He must know the latest wrinkles about using the electric light wires for an antenna and be up on the latest changes in broadcasting. If he can do all these things, he can sell radio equipment, if he has enthusiasm and a certain amount of go to him.

Jewett Heads DeForest

Edward H. Jewett, heading a syndicate of Detroit men who purchased a controlling interest in the De Forest Radio Telephone & Telegraph Company last spring, has been elected president of the company. The active management of the company will be practically the same as before, Charles M. Gilbert the former president becoming vice president and treasurer.

Important Trade Meeting

The Radio Trade Association is to hold an open meeting of the trade and conducted under its own auspices at the Grand Central Palace, New York City, on October 9 at three o'clock in the afternoon. While the complete program could not be learned at the time of going to press it is known that the following well known authorities on radio are scheduled to speak:

H. Gernsbach, editor, *Radio News*—"Summarizing the Year in Radio"; H. T. Melhuish, sales manager, Radio Corporation of America—"Forecasting the Coming Year"; H. H. Eby, H. H. Eby Company—"The Manufacturers' Needs"; W. E. Harkness, manager, radio department, American Telephone & Telegraph Company—"The Broadcasters' Position"; Benjamin Gross, president, Radio Stores Corporation—"The Jobbers' Problems"; Harold M. Schwab, Harold M. Schwab, Inc.—"What the Retailer Wants"; and Major J. Andrew White, editor, *Wireless Age*—"What the Public Wants."

The meeting will be conducted by

Henry M. Shaw, president of the Association, and it is felt that under his chairmanship a profitable occasion will result.

Radio Show for Jersey

Over thirty radio manufacturers in New Jersey, who have recently formed an organization for the betterment of the radio industry, known as the Radio Manufacturers' Association of New Jersey, have announced that plans are being completed by the Association for a radio show, to be held this fall in the Sixth Infantry Armory at Newark.

They have decided, owing to the fact that radio is so closely connected with the electrical industry, that electrical exhibitors will be invited to participate in the exposition. It is believed that in this way they will be able to give to the public, as well as the trade, a better and more interesting show.

Nightly novelty attractions will be featured, which will keep the interest of the public throughout the entire time.

Special booths will display the latest work of the army and navy.

Exhibits of handiwork of manual training students in the various New Jersey schools will also be shown, obtained on a competitive basis.

A special distortionless amplifier will be installed to furnish music for radio dancing, which will be in operation every night, the music being furnished by many of the local broadcasting stations.

The show will not run for a profit, as the cost of the booths will be nominal and a large number of manufacturers are expected to bring their products before the public.

WOC Resumes Full Schedule

Beginning September 16, broadcasting station WOC, Davenport, Ia., resumed its full winter schedule, comprising musical programs every night in the week excepting Tuesday and a more extensive program Sunday evening than heretofore.

Radio Stations Increase

A gain of 1,126 radio stations of all kinds in the United States during the year ended June 30 is reported by the U. S. Department of Commerce. On June 30 there were 21,967 ship and land radio stations. Broadcasting stations number 191 more than a year ago, having increased from 382 to 573.

WHY Mercury Time Switch IS THE BEST

Many of the large users of illuminated Bulletin Boards have standardized on MERCURY TIME SWITCHES, because they are reliable to performance, and require little servicing.

Utter simplicity of design, quality material and workmanship and elimination of all friction, arcing and corroding are the paramount features.

The Switch is not geared to the clock movement, thereby making all parts easily accessible.

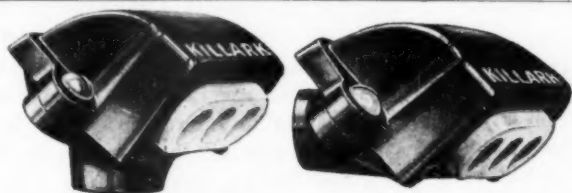
Electrical Dealers will find a big market for Mercury Time Switches for use on electric signs, show windows and chicken coops.

FREE TRIAL

We will send a Mercury Time Switch to any reliable dealer for free trial. Order one today and test it to your complete satisfaction.

Dealers and distributors wanted in every territory in the U. S. and Canada.

THE MERCURY TIME SWITCH CO.
31 East Woodbridge St., Detroit, Mich.
MANUFACTURERS DISTRIBUTING CO.,
291 Broadway, New York, N. Y.
Eastern Representatives.



On a Vertical Conduit
½ Inch to 2 Inches

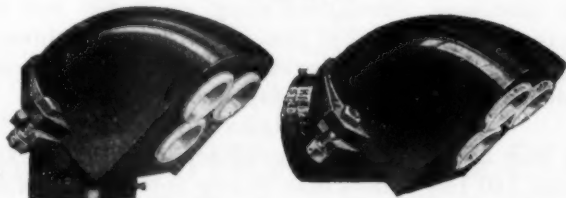
On a Horizontal Conduit
½ Inch to 2 Inches

Electrical Contractors Like the "Electrolet" Entrance Fitting, Because:

- It can be used on any kind of entrance, ½-inch to 3 inches.
- It comes assembled; there are no parts to buy separately.
- There are only two screws to be tightened.
- The porcelain is not held on with screws, to be snapped in two at the last twist of the screwdriver.
- It is weatherproof, and has the Underwriters' approval.

Write for booklet

KILLARK ELECTRIC MFG. CO.
3940-48 Easton Avenue
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On a Vertical Conduit
2½ and 3 Inches

On a Horizontal Conduit
2½ and 3 Inches

Something Practical FOR Exposed Conduit Wiring "T & B" Conduit Bodies



3 bodies and 2 couplings

that make
HUNDREDS OF COMBINATIONS

—A—

**Small investment quick,
turnover, minimum stock**

For further information ask your jobber or
Write us.

Thomas & Betts Co.

63 Vesey Street, New York City
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OR APPLY TO NEAREST AGENT:

DOHERTY-HAFNER CO., Chicago.
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WAREHOUSE STOCKS CARRIED IN
Chicago San Francisco Seattle Los Angeles

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

Meaning of Kilocycles

Expert Says Wave Length Should be Spoken of in Frequencies

Broadcasting programs which are published in daily newspapers throughout the country and in radio magazines have always carried the wave length of each station, this being given in meters. Some little time ago there was a growing use of the term Kilocycle instead of meter.

The kilocycle frequency of a station is found by dividing 300,000 by the meter wave length of a station. Thus a station with a wave length in meters of 300 would have a kilocycle frequency of 1,000. C. W. Horn, superintendent of the radio operations of the Westinghouse Electric & Mfg. Co., says:

Authorities on radio are agreed that the best way of specifying the wave length of a radio station or transmitter is in cycles or kilocycles.

A radio wave length travels with the speed of light, which we know to be approximately 300,000,000 metres per second. If the wave length of a transmitter were one meter this would mean that there would be 300,000,000 vibrations or oscillations per second, or, in other words, that the frequency would be 300,000,000. If the wave length, however, were 300,000,000 metres, then it would take one second for one oscillation to take place, which would be a frequency of one for that wave length.

From the above it will be seen that by dividing the speed of electricity by the number of oscillations per second, or the frequency as it is usually called, we obtain the wave length in metres. This is the distance between the two successive oscillations. If there is but one oscillation per second, then the wave length would be the distance traveled in one second, which would be 300,000,000 metres.

However, if there should be a million cycles per second, then the distance traveled by the wave in one second divided by the number of cycles in that second would give you the wave length of one complete cycle. In other words, more simply expressed, the greater the number of oscillations in a given space of time then the shorter they must be in order to get that many in.

The greatest advantage, however, of expressing the length of the wave in frequencies is that radio formulae always call for the frequency and much time is saved. Also, if you know that your receiver will tune to within 20,000 cycles of another wave, it is much sim-



Operating Room of Station WMAF, Owned by the Round Hills Radio Corporation, Dartmouth, Massachusetts

pler to note that the figure is 20,000 cycles than that it is perhaps two metres on the lower wave lengths and perhaps 200 metres on the higher wave lengths. For this reason it is advisable for every one connected with radio to accustom themselves to thinking of wave lengths in frequencies rather than in metres.

Station WJAP, Duluth, Minn.

The broadcasting station WJAP at Duluth, Minn., is one of the pioneer stations of the Northwest, having been originally opened early in 1922 with a 5 watt tube. Many improvements have been made since that time and the present equipment uses one 50 watt modulator and two 50 watt oscillators making the normal antenna output 100 watts.

The speech input equipment consists of a Pathe loud speaker or microphone with a two stage Atwater Kent amplifier for volume which is fed into a Western Electric amplifier with a transformer and choke coil in between and in turn fastened directly to the set. The transmitting antenna is supported by two 4 inch steel towers 50 feet high, these being located on the roof of the Lyceum Theatre, a seven story building. The height of the antenna above the ground is 150 feet.

The antenna is made of four No. 8 copper wires 4 feet apart and 110 feet between insulators. The counterpoise is the same length with forty wires 40 feet below the antenna. A special construc-

tion has been used to prevent breakage by ice and snow.

Programs are broadcast on Monday, Thursday and Sunday nights and Sunday noon. Musical programs, orchestra selections and church services are included in the programs. The territory covered is normally 1500 miles and reports of reception have been received from every state in the union, Cuba, Mexico and several cities in Canada. The station is operated by the Kelly Duluth Company, the Lyceum Theatre and the Duluth Herald. The Flaaten Conservatory of Music has charge of the programs.

Money Required for Radio

More Funds Needed For That Division of the Department of Commerce

When the next session of Congress takes up for consideration the appropriations to be made for the conduct of the federal government during the coming fiscal year, a greatly increased appropriation will be asked for the operation of the Radio Division of the Department of Commerce, which today is struggling along on funds but little greater than those available three and four years ago when broadcasting, as we know it today, was nonexistent.

If the Radio Division is to perform its functions efficiently, at least \$100,000 more than is now appropriated will be necessary, it is believed. A greatly increased force of inspectors is needed if the broadcasting stations and amateur



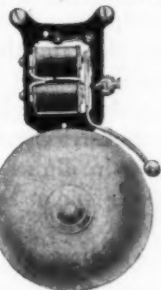
Some of our Manufactured Products



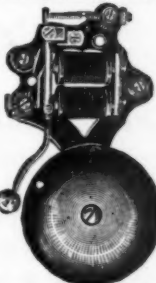
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ALL STYLES OF DROPS
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IRON BOX
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PULL CHAIN
ALL FINISHES

FIRE ALARMS

CABINETS
BOXES
SYSTEMS FOR CURRENT
OR STORAGE BATTERY

SHADES

METAL SHADES OF ALL
DESCRIPTIONS

LETTER BOXES

OF ALL DESCRIPTIONS

FLOOR BOXES

SPEAKING TUBES

TIN TUBE
FLEXIBLE TUBE
WHISTLES
ELBOWS
COLLARS
ROSES

BURGLAR ALARMS

DOOR SPRINGS
WINDOW SPRINGS
TRANSOM SPRINGS

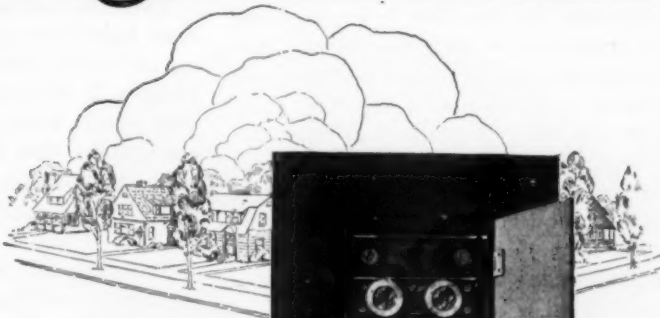
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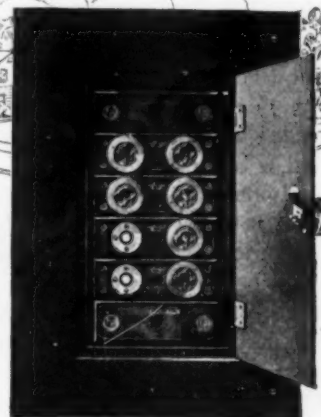
The Line of Standardized Panelboards



Type R

Safety type small
building panelboard
for two and three
wire requirements,
furnished with or
without main switch.

Cut shows fuses.
Fuses not furnished.



For Residences, Apartments, Stores

The Triumph Safety Type R Residence Panelboard is the last word in modern, safety type, panelboard engineering. It can be used with equal facility in residences, apartment buildings and stores. It is absolutely safe and can be located at the center of distribution. It is a factory

Type T-P
Plug fuse type connection, 30A tumbler switch controlled branches; safety, with one door opening.

Type T-C
Cartridge fuse type connection, 30A tumbler switch controlled branches; safety with door-in-door front.

Type P
Plug fuse type branches. An extremely narrow panelboard safety type. Also made in two row construction and called Type 2P.

product of standardized unit construction, that costs less—installed—than the old-fashioned porcelain-block, fuse-plug assembly.

Types T-P, T-C, P and 2P are other members of this better designed line of standardized, unit constructed, safety type panelboards.

Write for bulletins giving full information on the Triumph Standardized Safety Type Panelboards.

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District Offices:

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Manufacturers of

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Type, Standardized Panelboards
and Cabinets; knife switches; safety
switches; hanger outlets; reversible-
cover floor boxes; A. C. and D. C.
Distribution Switchboards.

plants are to be checked up properly. At present, practically all the time of inspectors on the coast is required for the inspection of ship stations and similar government work, and they are hard pressed for the time in which to make these necessary inspections of other stations. The recent reallocation of wave lengths, however, makes it necessary that every station be extremely sharp on its wave, if there is to be no interference, and careful checking up of the wave length used is necessary.

Practically every inspector is overworked, and it is the desire of officials in Washington to give them such assistance as may be necessary for them to carry on all of the many operations which go to make up an inspector's day. At the same time, the Washington offices are none too well supplied with labor, and hard work and long hours are necessary for the handling of the great mass of data, reports, complaints, letters, applications, etc., which pour in in a steady stream.

First Lady is Radio Fan

Mrs. Calvin Coolidge, the new First Lady of the Land is an ardent radio fan and derives much pleasure from her receiving set which is a large one of recent type. The set has for some time past been installed in the suite at the New Willard Hotel, the official residence of the former vice president and it was moved into the White House following the elevation of Mr. Coolidge to the Presidency.

New York Radio Show

The American Radio Exposition Company will hold its second annual radio exposition on the fourth floor of the Grand Central Palace, New York City, October 6 to 13, inclusive.



The Radio Committee at the Cincinnati Fall Festival Sorting the Thousands of Communications Received as a Result of the Radio Wedding Broadcast by WLW

To Broadcast in Mexico

Two radio telephone broadcasting stations have been opened in Mexico City according to a report from U. S. Consul Thomas D. Bowman, Mexico City. Various efforts have been made to obtain concessions for the establishment of such stations, but it is only recently that the government granted this permission.

There appears to be great enthusiasm in Mexico over broadcasting, and it is believed that the market for radio sets in Mexico is favorable to considerable development by American manufacturers.

New York Gets Radio School

The East Side Branch of the New York Y. M. C. A. has started a radio school specializing in the merchandising end of the business. The course is planned specially for the small radio dealer. It occupies fifteen sessions and includes such subjects as salesmanship, window display, copy writing, as well as the fundamentals of radio installation and display. The idea is being strongly backed by large manufacturers of radio apparatus who will assist by lending equipment.

Appoints Sales Manager

C. D. Dunbar, for the past fifteen years in the office appliance field, has been appointed general sales manager of the American Radio and Research Corporation with headquarters at Boston.

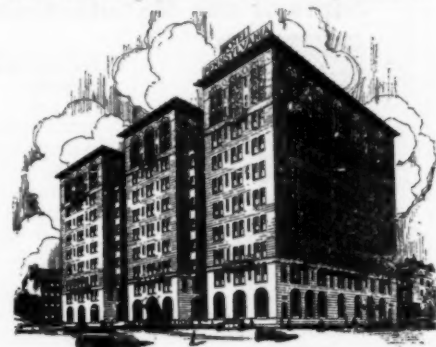
Australian Regulations

Mail advices from Australia, necessarily several weeks old, indicate that the authorities are having a hard time making up regulations for broadcasting and receiving radio features. On one hand it is proposed to follow the British system of licensing receiving apparatus and exacting a fee which shall be paid to the broadcasters to defray their expenses, allowing no one to listen unless he has a paid up license, and on the other hand it is proposed to follow the American system.

Latest reports indicate that neither proposal is looked upon as satisfactory and it is hoped that somewhere in between the two extremes will be found a working plan that will prove satisfactory all the way round.

Another Radio Hotel

The new Hotel Pennsylvania in Philadelphia which is just completed is being equipped with one of the most modern and comprehensive radio systems de-



The Philadelphia Hotel in Which a Complete Radio Service Was Installed

veloped so far. The hotel occupies an entire city block in West Philadelphia, has upwards of six hundred rooms and numerous banquet halls, ball rooms and other features usually found in a first class hostelry of this kind.

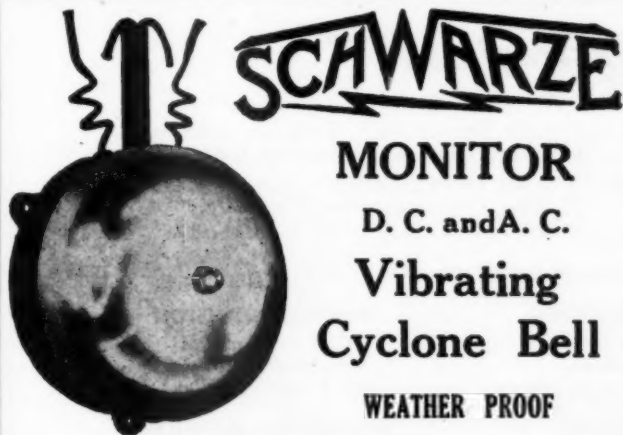
The radio equipment is Western Electric and is being installed by Durham & Company of Philadelphia. A special radio room has been built on the roof and this is being equipped with receiving apparatus connected to powerful amplifiers which in turn distribute the radio features to the main dining room, lobby, lounge, smoking room, banquet hall and grill. These rooms can be served separately or simultaneously. The loud speakers can also be used for paging guests or making announcements. This is operated and controlled from the telephone switchboard.

Manhattan Loud Speaker

A new loud speaker being made by the Manhattan Electrical Supply Co., Inc., New York City, has what is called a concert modulator which allows it to be accommodated to various circuits, tubes or batteries with which it may be operated.



No batteries are required and the diaphragm is positively locked in the extra heavy lead compound reproducing unit which prevents all vibration excepting in the diaphragm itself. The instrument stands 25 inches high and the bell of the wood fibre horn is 10 inches in diameter. It is finished in crystalline varnish of mahogany color.



SCHWARZE

MONITOR

D. C. and A. C.

Vibrating Cyclone Bell

WEATHER PROOF

Type No. 62 For Direct Current

Type No. 72 For Alternating Current

FURNISHED WITH 8-INCH GONG ONLY

For operation on 250 volts or less Alternating and Direct Current.

Has all terminals and current-carrying parts heavily insulated from frame and securely inclosed in metal case. For multiple operation only.

Always Give Voltage of Circuit When Ordering.

WRITE FOR PRICES AND BULLETIN

Manufactured by

SCHWARZE ELECTRIC CO.

ADRIAN,

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Knu Canopy Insulator



Approved by Underwriters' Laboratories

Can be applied to canopy without the use of tools

in rolls of 10 feet.

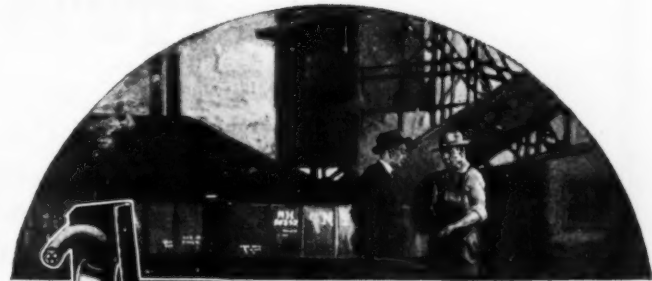
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Telephone 5200 Canal



There Is a Reelite Built to Carry *Any* Current Where You Need It

The new Mogul Type Reelite is a big brother to the thousands of Reelites in use today in industrial America. For years, wherever portable cords are used, these Reelites have kept them reeled clean and unkinked—off the floor, away from the wheels of trucks and the heels of workmen.

But today this convenience and economy is extended to even broader fields. The automatic reel of the new Mogul Type Reelite holds and automatically retrieves cable of any number of conductors required—in lengths from 10 to 125 feet, depending on the size of the cable. It is furnished with 1" male-threaded hubs and is readily adaptable for portable machinery, cranes, dredges, mining machinery, magnets, etc. If you have a problem of current supply and cord maintenance, let our engineers show you, without cost or obligation, how it can be solved with one of the Reelite models.

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*Marshall L. Barnes-----1910-1912
Ernest Freeman-----1912-1914
*Deceased.

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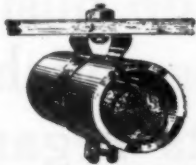
L. K. Comstock
21 East 40th Street, New York City

ANNUAL CONVENTION, WASHINGTON, D. C., WEEK OF OCTOBER 8, 1923.

The Electragist

The Contractor-Dealer, as he has been called, is an individual, many-sided. He is, first of all, a man of action, and has to be ready at all times to be "on the job." On the other hand, he is a storekeeper and a competent judge of electrical materials. And that is not all.

We would like to have you ask any Electragist what he thinks of—



CABLE or CONDUIT HANGERS

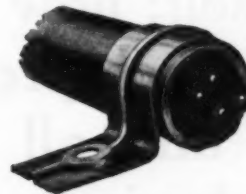
In sizes $\frac{3}{8}$ to $2\frac{1}{2}$ inches. Japanned or Galvanized.

A safe, convenient and economical wiring device.



SPECIALTIES

"Your jobber has them"



JIFFY CLIP

The one-hole steel pipe strap; galvanized only.

$\frac{1}{8}$ to $1\frac{1}{4}$ -inch sizes. For either temporary or permanent construction.

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RAVEN CORE—A Rubber Covered Wire of Distinction!

Made by a house of standing.

Specified by all the leading architects.

Used by the Contractors who do the better grade of work.

Can you afford to overlook it?

NEW YORK INSULATED WIRE CO.

Main Office: NEW YORK

Factory: WALLINGFORD, CONN.

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DENVER

LOS ANGELES

CHICAGO

BOSTON

If you have no bookkeeper and want to know how much money you have; how much you owe; how much money is due you; how much stock on hand; how much stock you buy; how much you sell; how much it costs you to do business; how much profit you make; or how much you lose; and all other necessary facts regarding your business, you should employ the

New Business Record

An easy way of keeping your accounts without a bookkeeper. Everything about it is plain and easily understood. It consists of only eight forms, and these show the money taken in and paid out; the bills to be collected and to be paid; the general expense, investment and stock. There also is binder and memo book.

Depend on it. It is handy, and always ready for you to use; it is reliable and accurate; it saves you time, money, and worry; it settles disputes and saves money for you; it helps you straighten out matters with your banker, your jobber, and the tax collector; it is a necessary factor in your business.

The New Business Record is for use by the Electragist without a bookkeeper. For the larger business that has a regular bookkeeper the Standard Accounting System is recommended. Both are copyrighted and issued by the

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INTERNATIONAL

Formerly National Association of Electrical Contractors and Dealers

15 West 37th Street, New York City

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The idea back of the "DIAMOND H" Trade Mark—

THOROUGHNESS — QUALITY — SERVICE

Thoroughness in design, materials and construction can alone produce quality. Nothing but quality can give service. Nothing but a service-giving capacity can create a permanent and growing business.

In the "Diamond H" trade mark this company has aimed to symbolize the utmost of value to the electrical contractor.

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The New Emerson Motor *For Washing Machines*

A $\frac{1}{4}$ hp. ventilated splash-proof induction motor with a maximum capacity 250% of its rating—split-phase clutchless type.

SPECIAL FEATURES

Terminals in external box, with metal cap—motor easily reversed if desired.

Base with 6 slots, for mounting by two or four bolts.

Base may be remounted on top of motor for suspension below frame or platform, leaving oil wells upright.

Complete with extra heavy (No. 16) weather-proof cord, separable armored plug, and 2-inch pulley.

Mass production makes the price attractive. Write for it.

The Emerson Electric Mfg. Co.

2018 WASHINGTON AVENUE

50 Church St., New York City

The Emerson Company Sell no Apparatus at Retail

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Conn. Telephone & Elec. Co.
Ostrander & Co.
Partrick & Wilkins Co.
Stanley & Patterson.
Western Elec. Co.

AMMETERS

Norton Elec'l. Instrument Co.

ANNUNCIATORS

Ansonia Elec. Co.
Conn. Telephone & Elec. Co.
Ostrander & Co., W. R.
Partrick & Wilkins Co.
Stanley & Patterson.

ARRESTERS, LIGHTNING

General Elec. Co.
Westinghouse Elec. & Mfg. Co.

ASBESTOS WOOD

Johns-Manville, Inc.

ATTACHMENTS, SOCKET

Arrow Electric Co.
Hubbell, Inc., Harvey

BATTERIES, DRY

Manhattan Elec. Supply Co.
Stanley & Patterson

BATTERY CHARGING OUTFITS

Westinghouse Elec. & Mfg. Co.

BELLS, ELECTRIC

Ansonia Elec. Co.
Connecticut Tel. & Elec. Co.
Manhattan Elec. Supply Co.
Ostrander & Co., W. R.
Partrick & Wilkins
Schwarze Elec. Co.
Stanley & Patterson.

BENDERS, CONDUIT

Steel City Elec. Co.
Thomas & Betts Co.

BLOCKS, MOLDING

Bryant Electric Co.
Roberts Elec. Sup. Co., H. C.

BOOKS, ELECTRICAL

Ass'n of Electragists, International
Soc'y for Elec'l Development, Inc.

BOLTS, TOGGLE

National Metal Molding Co.
Thomas & Betts Co.
Westinghouse Elec. & Mfg. Co.

BOXES, CONDUIT

Appleton Elec. Co.
Chicago Fuse Mfg. Co.
Hart Mfg. Co.
Hart & Hegeman Mfg. Co.
National Metal Molding Co.
Sprague Elec. Works.
Steel City Elec. Co.
Thomas & Betts Co.
Westinghouse Elec. & Mfg. Co.

BOXES, FLOOR

Frank Adam Electric Co.
Sprague Elec. Works.
Stanley & Patterson.
Steel City Elec. Co.
Thomas & Betts Co.
Westinghouse Elec. & Mfg. Co.

BOXES, MANHOLE (JUNCTION)

Frank Adam Electric Co.
General Elec. Co.
Johns-Pratt Co.

BOXES, METER PROTECTING

General Elec. Co.
Westinghouse Elec. & Mfg. Co.

BOXES, PULL

Westinghouse Elec. & Mfg. Co.

BOXES, WOOD OR CABINET

Stanley & Patterson.

BRACKETS, TELEPHONE

Stanley & Patterson.
Western Electric Co.

BRUSHES

General Electric Co.
Westinghouse Elec. & Mfg. Co.

BUSHINGS, BOX AND CABINET

Fralick & Co., S. R.
Pass & Seymour, Inc.
Westinghouse Elec. & Mfg. Co.

CABINETS, METAL

Frank Adam Electric Co.
Hart & Hegeman Mfg. Co.
Thomas & Betts Co.
Westinghouse Elec. & Mfg. Co.
Wurdack Elec. Mfg. Co.

CHARGING OUTFITS

General Elec. Co.
Robbins & Myers Co.
Westinghouse Elec. & Mfg. Co.

CIRCUIT BREAKERS, (Automatic)

General Elec. Co.
Westinghouse Elec. & Mfg. Co.

CLAMPS, CABLE SUPPORTING

Steel City Elec. Co.

CLAMPS, GROUND CONNECTION

Fralick & Co., S. R.
General Electric Co.
Hart Mfg. Co.
Mineralac Elec. Co.
National Metal Molding Co.
Sprague Electric Works
Thomas & Betts Co.

CLAMP TEST

Appleton Elec. Co.

CLEANERS, VACUUM

Western Electric Co.

CLIPS, FUSE

Bryant Electric Co.
Johns-Pratt Co.

CLOCKS, ELECTRIC

Tork Company.

COILS, CHOKE

General Electric Co.
Westinghouse Elec. & Mfg. Co.

COLORING AND FROSTING, INCANDESCENT LAMPS

Philadelphia Elec. Co.

CONCENTRIC WIRING FITTINGS

General Electric Co.

CONDUCTORS, ARMORED

Tubular Woven Fabric Co.

CONDENSERS, TELEPHONE AND TELEGRAPH

Connecticut Tel. & Elec. Co.
Western Elec. Co.

CONDUIT BOXES

Thomas & Betts Co.

CONDUIT, INTERIOR

Alphaduct Co.
American Circular Loom Co.
Central Tube Co.
Clifton Mfg. Co.
Enameled Metals Co.
Killark Elec. Mfg. Co.
National Metal Molding Co.
Saylor Electric & Mfg. Co.
Sprague Elec. Works.
Steel City Elec. Co.
Trumbull Elec. Mfg. Co.
Tubular Woven Fabric Co.

CONDUITS, UNDERGROUND

Johns-Manville, Inc.

CONNECTORS, BRASS CYLINDER

Bryant Elec. Co.
Frankel Connector Co.
Trumbull Elec. Mfg. Co.

CONNECTORS, EXTENSION CORD

Arrow Electric Co.
Hubbell, Inc., Harvey

CONNECTORS, SLEEVE

Bryant Electric Co.

CONNECTORS, SOLDERLESS

Dossert & Co.
Frankel Connector Co.
Westinghouse Elec. & Mfg. Co.

COOKING UTENSILS, ELECTRIC

Westinghouse Elec. & Mfg. Co.

CORDS, FLEXIBLE

Tubular Woven Fabric Co.

COUPLING, SHAFT

General Electric Co.

CUTOUPS

Arrow Electric Co.
Bryant Electric Co.
Chicago Fuse Mfg. Co.
General Electric Co.
Hart & Hegeman Mfg. Co.
Johns-Pratt Co.
Pass & Seymour, Inc.
Trumbull Elec. Mfg. Co.
Westinghouse Elec. & Mfg. Co.

DECORATIVE LIGHTING

General Elec. Co.

DYNAMOMETERS

Sprague Elec. Works.

FANS, A.C. AND D.C.

Emerson Elec. Mfg. Co.
Western Electric Co.
Westinghouse Elec. & Mfg. Co.

EBONY ASBESTOS WOOD

Johns-Manville, Inc.

FANS, HANGERS

Adam Electric Co., Frank

FANS, MOTOR

Emerson Elec. Mfg. Co.
General Elec. Co.
Manhattan Electric Supply Co.
Robbins & Myers Co.
Sprague Electric Works
Western Electric Co.
Westinghouse Elec. & Mfg. Co.

FARM LIGHTING GENERATORS

Westinghouse Elec. & Mfg. Co.

FIBRE

Johns-Manville, Inc.

FITTINGS, FIXTURE, IRON

Appleton Electric Co.
Bryant Elec. Co.
Fralick & Co., S. R.
General Electric Co.
Killark Elec. Mfg. Co.
National Metal Molding Co.
Sprague Elec. Works.
Steel City Electric Co.
Thomas & Betts Co.
Trumbull Electric Mfg. Co.
Westinghouse Elec. & Mfg. Co.

FIXTURE STUDS

Fralick & Co., S. R.
Thomas & Betts Co.

FURNACES, ELECTRIC

General Electric Co.
Westinghouse Elec. & Mfg. Co.

FUSE REDUCERS

Plainville Elec'l Prod. Co.

FUSES, ENCLOSED

Bryant Electric Co.
Chicago Fuse & Mfg. Co.
General Electric Co.
Johns-Pratt Co.
Westinghouse Elec. & Mfg. Co.

FUSES, OPEN LINK

Chicago Fuse & Mfg. Co.
General Electric Co.
Westinghouse Elec. & Mfg. Co.

FUSES, TELEPHONE

Chicago Fuse & Mfg. Co.
Western Electric Co.

GENERATORS, LIGHT AND POWER

Emerson Electric Mfg. Co.
General Electric Co.
Robbins & Myers Co.
Sprague Electric Works
Westinghouse Elec. & Mfg. Co.

GLASSWARE

National X-Ray Reflector Co.

GROUND RODS

Copper Clad Steel Co.

GUARDS, LAMP

Hubbell, Inc., Harvey

FUSE REDUCER

Plainville Elec'l Prod. Co.

HANGERS, ARC LAMP

General Electric Co.
Wakefield Brass Co., F. W.
Westinghouse Elec. & Mfg. Co.

HANGERS, CONDUIT and CABLE

Appleton Electric Co.
Mineralac Electric Co.
Pass & Seymour, Inc.
Steel City Elec. Co.
Thomas & Betts Co.

HANGERS, FIXTURE and BOX

Westinghouse Elec. & Mfg. Co.

HANGERS, LAMP

Bryant Electric Co.

HEATERS, LIQUID

General Electric Co.
Westinghouse Elec. & Mfg. Co.

HEATING DEVICES

Commonwealth Edison Co.
Westinghouse Elec. & Mfg. Co.

HIGH TEMPERATURE CEMENTS

Johns-Manville, Inc.

HOLDERS, SHADE

Arrow Electric Co.
Hubbell, Inc., Harvey
National X-Ray Reflector Co.

HOLDERS, BATTERY

Ostrander & Co., W. R.
Stanley & Patterson

INSTRUMENTS, INDICATING

General Electric Co.
Westinghouse Elec. & Mfg. Co.

INSTRUMENTS, LAMP TESTING

General Electric Co.

INSTRUMENTS, MINIATURE SWITCHBOARD

General Electric Co.
Westinghouse Elec. & Mfg. Co.

INSTRUMENT, POCKET

Connecticut Tel. & Elec. Co.

INSTRUMENTS, RECORDING and CURVE DRAWING

General Electric Co.
Westinghouse Elec. & Mfg. Co.

INSTRUMENTS, TESTING

General Electric Co.
Westinghouse Elec. & Mfg. Co.

INSULATION, MOLDED

Johns-Manville, Inc.
Johns-Pratt Co.
Westinghouse Elec. & Mfg. Co.

INSULATORS, CANOPY

Arthur F. Stanley
General Electric Co.

INSULATORS, HIGH VOLTAGE

General Electric Co.
Johns-Manville, Inc.
Stanley, Arthur F.
Westinghouse Elec. & Mfg. Co.

INSULATORS, TREE

Westinghouse Elec. & Mfg. Co.

IRONS, CURLING

Westinghouse Elec. & Mfg. Co.

IRONS, SOLDERING

General Electric Co.

JOINTS, CABLE

Dossert & Co.
Westinghouse Elec. & Mfg. Co.

JOINTS, FIXTURE INSULATING

Thomas & Betts Co.

LAMPS, ARC

General Electric Co.
Westinghouse Elec. & Mfg. Co.

LAMPS, AUTOMOBILE

Connecticut Tel. & Elec. Co.

LAMPS, INCANDESCENT

Edison Lamp Works
General Electric Co.
Novelty Lamp & Shade Co.
Westinghouse Lamp Co.

LAMPS, PHOTO-ENGRAVING

General Electric Co.



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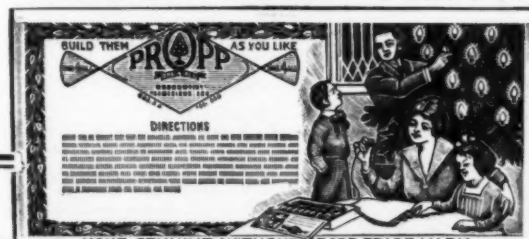
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(Builders of ammeters and voltmeters for over
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BUYER'S GUIDE—Continued.

LAMPS, TROUBLE, AUTOMOBILE, PORTABLE, HAND
Connecticut Tel. & Elec. Co.
Stanley & Patterson.

LIGHTING FIXTURES

Frank, Inc., I. P.
Guth Co., Edwin F.
National X-Ray Reflector Co.
Novelty Lamp & Shade Co.
Planetlite Co.
Shapiro & Aronson, Inc.
Wakefield Brass Co., F. W.
Western Electric Co.
Westinghouse Elec. & Mfg. Co.
Westinghouse Lamp Co.

LIGHTS, STAGE

Sprague Electric Works
Western Electric Co.
National X-Ray Reflector Co.

LOCKS, AUTOMOBILE

Connecticut Tel. & Elec. Co.

LOCKNUTS

Fralick & Co., S. R.

LUGS, TERMINAL

Dossert & Co.
Trumbull Elec. Mfg. Co.
Westinghouse Elec. & Mfg. Co.

METAL PRODUCTS

Midwest Metal Prod. Co.

MOLDING, METALLIC

Appleton Electric Co.
National Metal Molding Co.

MOTOR GENERATORS

General Electric Co.
Sprague Elec. Works
Westinghouse Elec. & Mfg. Co.

MOTORS, POWER

Emerson Elec. Mfg. Co.
General Electric Co.
Robbins & Myers Co.
Sprague Electric Works
Western Electric Co.
Westinghouse Elec. & Mfg. Co.

OZONIZERS, INDUSTRIAL

Sprague Electric Works

PADS, HEATING

Philadelphia Elec. Co.
Westinghouse Elec. & Mfg. Co.

PAINTS AND COMPOUNDS

General Electric Co.
Johns-Manville, Inc.
Minerallac Elec. Co.
Standard Underground Cable Co.
Westinghouse Elec. & Mfg. Co.

PANEL BOARDS

Adams Electric Co., Frank
Johns-Manville, Inc.
Plainville Elec'l Products Co.
Trumbull Electric Mfg. Co.
Westinghouse Elec. & Mfg. Co.

PERCOLATORS

Westinghouse Elec. & Mfg. Co.

PLANTS, LIGHTING

General Electric Co.
Western Electric Co.
Westinghouse Elec. & Mfg. Co.

PLATES, FLUSH SWITCH

Arrow Electric Co.
Bryant Electric Co.
Connecticut Tel. & Elec. Co.
Hart & Hegeman Mfg. Co.
Hubbell, Inc., Harvey

PLIERS, RUBBER INSULATED

Rubber Insulated Metals Co.

PLUGS AND RECEPTACLES

Arrow Electric Co.
Bryant Electric Co.
Chicago Fuse Mfg. Co.
General Electric Co.
Hart & Hegeman Mfg. Co.
Hart Mfg. Co.
Hubbell, Inc., Harvey
Johns-Manville, Inc.
Johns-Pratt Co.
National Metal Molding Co.
Pass & Seymour, Inc.
Sprague Electric Works
Stanley & Patterson
Trumbull Electric Co.
Western Electric Co.
Westinghouse Elec. & Mfg. Co.

PLUGS, SPARK

Western Electric Co.

POLE LINE HARDWARE

Johns-Manville, Inc.
National Metal Molding Co.
Westinghouse Elec. & Mfg. Co.

PORCELAIN, STANDARD

General Electric Co.

PORCELAIN PRODUCTS

Pass & Seymour, Inc.
Paulding, Inc., J. I.
Sears, Henry D.

PORTABLES

National X-Ray Reflector Co.
Novelty Lamp & Shade Co.

POSTS, LAMP, ORNAMENTAL

Westinghouse Elec. & Mfg. Co.
Novelty Lamp and Shade Co.

POTS, MELTING

General Electric Co.
Westinghouse Elec. & Mfg. Co.

PROJECTORS, ELECTRIC

General Electric Co.
National X-Ray Reflector Co.
Western Electric Co.
Westinghouse Elec. & Mfg. Co.

PROTECTORS, LINEMEN'S

Minerallac Electric Co.

PROTECTORS, THREAD, CON-

DUIT
Enameled Metals Co.

PROTECTORS

Connecticut Tel. & Elec. Co.
Minerallac Electric Co.
Patrick & Wilkins Co.
Stanley & Patterson

RADIATORS, ELECTRIC

Westinghouse Elec. & Mfg. Co.

RADIO APPARATUS

General Electric Co.
Hart & Hegeman Mfg. Co.
Martin-Copeland Co.
Ostrander & Co., W. R.
Philadelphia Elec. Co.
Stanley & Patterson
Trumbull Elec. Mfg. Co.
Westinghouse Elec. & Mfg. Co.

RANGES, ELECTRIC

Westinghouse Elec. & Mfg. Co.

REFLECTORS

National X-Ray Reflector Co.

REFLECTORS, PORCELAIN, EN-

AMELED, IRON AND STEEL
Hubbell, Inc., Harvey
Westinghouse Elec. & Mfg. Co.

REGULATORS, VOLTAGE

General Electric Co.
Westinghouse Elec. & Mfg. Co.

RHEOSTATS

General Electric Co.
Martin-Copeland Co.
Westinghouse Elec. & Mfg. Co.

ROSETTES

Arrow Electric Co.
Bryant Electric Co.
General Electric Co.
Hart & Hegeman Mfg. Co.
Hubbell, Inc., Harvey
National Metal Molding Co.
Pass & Seymour, Inc.
Trumbull Electric Mfg. Co.

SAFETY PANELS

Penn Elec'l & Mfg. Co.

SCREW DRIVERS, RUBBER

INSULATED
Rubber Insulated Metals Co.

SHADES, METALLIC

Hubbell, Inc., Harvey
Ostrander & Co., W. R.

SIGNALS, FACTORY AND

OFFICE
Stanley & Patterson.

SIGNS, EXIT

Sprague Electric Works

SOCKETS AND RECEPTACLES

Appleton Electric Co.
Arrow Electric Co.
General Electric Co.
Hart & Hegeman Mfg. Co.
Hubbell, Inc., Harvey
Johns-Manville, Inc.
National Metal Molding Co.
Ostrander & Co., W. R.
Pass & Seymour, Inc.
Sears, H. D.
Stanley & Patterson
Trumbull Electric Co., Inc.
Westinghouse Elec. & Mfg. Co.

SOLDERLESS CONNECTORS

Frankel Connector Co.

SOLDERING COMPOUNDS

Westinghouse Elec. & Mfg. Co.

STARTERS, MOTORS

General Electric Co.
Westinghouse Elec. & Mfg. Co.

STERILIZERS, WATER, ELEC-

TRIC
Sprague Electric Works
Westinghouse Elec. & Mfg. Co.

STRAPS AND CLAMPS, CON-

DUIT
Fralick & Co., S. R.

STOVES, DISC

Westinghouse Elec. & Mfg. Co.

SUPPLIES, ELECTRICAL

Adam Electric Co., Frank
Baltimore Elec'l Supply Co.
National Elec'l Supply Co.
Newark Elec'l Supply Co.
Ostrander & Co., W. R.
Philadelphia Electric Co.
Roberts Elec. Supply Co., H. C.
Rumsey Electric Co.
Southern Electric Co.
Stanley & Patterson.
Western Electric Co.

SWITCHBOARDS, LIGHT AND

POWER

Adam Electric Co., Frank
Bryant Electric Co.
General Electric Co.
Johns-Manville, Inc.
Plainville Elec'l Products Co.
Sprague Electric Works
Trumbull Elec. Mfg. Co., Inc.
Westinghouse Elec. & Mfg. Co.
Wurdack Elec. Mfg. Co.

SWITCH HANDLES, RUBBER

INSULATED
Rubber Insulated Metals Co.

SWITCHES, BABY KNIFE

Bryant Electric Co.
General Electric Co.
Hart & Hegeman Mfg. Co.
Trumbull Electric Mfg. Co.

SWITCHES, BATTERY

Hubbell, Inc., Harvey
Manhattan Elec'l Supply Co.
Ostrander & Co., W. R.
Patrick & Wilkins Co.
Trumbull Electric Mfg. Co.

SWITCHES, DISCONNECTING

General Electric Co.
Westinghouse Elec. & Mfg. Co.

SWITCHES, FIXTURE

Arrow Electric Co.
Hubbell, Inc., Harvey
Pass & Seymour, Inc.

SWITCHES, KNIFE

Adam Electric Co., Frank
General Electric Co.
Hart Mfg. Co.
Trumbull Elec. Mfg. Co.
Westinghouse Elec. & Mfg. Co.

SWITCHES, SAFETY

Adam Electric Co., Frank
General Electric Co.
Johns-Pratt Co.
Mutual Elec. & Machine Co.
Trumbull Elec. Mfg. Co.
Westinghouse Elec. & Mfg. Co.

SWITCHES, SNAP

Arrow Electric Co.
Connecticut Tel. & Elec. Co.
General Electric Co.
Hart & Hegeman Mfg. Co.
Hart Mfg. Co.
Hubbell, Inc., Harvey
National Metal Molding Co.
Pass & Seymour, Inc.
Trumbull Electric Mfg. Co.

SWITCHES, TIME, AUTOMATIC

General Electric Co.
Mercury Time Switch Co.

SWITCHES, VOLTMETER

Adam Electric Co., Frank
Trumbull Electric Mfg. Co.
Westinghouse Elec. & Mfg. Co.

TAPE, INSULATING

General Electric Co.
Johns-Manville, Inc.
N. Y. Insulated Wire Co.
Westinghouse Elec. & Mfg. Co.

TAPS, CURRENT

Arrow Electric Co.
Hubbell, Inc., Harvey

TELEPHONES

Connecticut Tel. & Elec. Co.
Stanley & Patterson
Western Electric Co.

TERMINALS, CABLE

Standard Underground Cable Co.

TERMINALS, TELEPHONE

Standard Underground Cable Co.
Western Electric Co.

TERMINALS, UNDERGROUND

SERVICE
Dossert & Co.

TOASTERS

Westinghouse Elec. & Mfg. Co.

TOOLS, BORING, ELECTRICIAN'S

Stanley & Patterson.

TOOLS, COMMUTATOR TRUING

General Electric Co.

TOOLS, PORTABLE, HAND

General Electric Co.

TRANSFORMERS

Connecticut Tel. & Elec. Co.
General Electric Co.
Westinghouse Elec. & Mfg. Co.

VOLTMETERS

Norton Elec'l. Instrument Co.

VULCANIZERS, ELECTRIC

Westinghouse Elec. & Mfg. Co.

WARMERS, FOOT AND RUG

Westinghouse Elec. & Mfg. Co.

WASHERS, CLOTHES

Western Electric Co.

WASHERS, DISH

Western Electric Co.

WELDING MACHINES, ELEC-

TRIC
General Electric Co.
Westinghouse Elec. & Mfg. Co.

WIRE, ANNUNCIATOR AND

OFFICE
American Steel & Wire Co.
General Electric Co.
Standard Underground Cable Co.

WIRE, ARMORED CABLE

National Metal Molding Co.
Sprague Electric Works

WIRE, AUTOMOBILE

General Electric Co.
Indiana Rubber & Ins. Wire Co.
New York Insulated Wire Co.
Safety Ins. Wire & Cable Co.

WIRE, BARE COPPER

Standard Underground Cable Co.

WIRE, FUSE

Appleton Electric Co.
Chicago Fuse Mfg. Co.
General Electric Co.
Westinghouse Elec. & Mfg. Co.

WIRE, IRON

American Steel & Wire Co.

WIRE, LEAD ENCASED

American Steel & Wire Co.
Atlantic Ins. Wire & Cable Co.
General Electric Co.
Indiana Rubber & Ins. Wire Co.
N. Y. Insulated Wire Co.
Standard Underground Cable Co.
Western Electric Co.

WIRE, MAGNET

American Steel & Wire Co.
Ansonia Electrical Co.
General Electric Co.
Standard Underground Cable Co.
Western Electric Co.

WIRE, RUBBER COVERED

A. A. Wire Co.
American Steel & Wire Co.
Atlantic Ins. Wire & Cable Co.
Boston Ins. Wire & Cable Co.
Detroit Insulated Wire Co.
General Electric Co.
Indiana Rubber & Ins. Wire Co.
New York Insulated Wire Co.
Standard Underground Cable Co.
Tub-lar Woven Fabric Co.
U. S. Rubber Co.
Western Electric Co.

WIRE, TELEPHONE

Western Electric Co.

WIRE, WEATHERPROOF

American Steel & Wire Co.
Ansonia Electrical Co.
General Electric Co.
Western Electric Co.

WIRELETS

Steel City Electric Co.



SALES FEATURES THAT WILL SELL

The absolute safety features and reliability provided by Westinghouse WK 10 and 20 Safety Motor Starters afford you many talking points that will help you sell. Point them out.

Protection to Operator—The operator is unable to touch live parts at any time. The door is so interlocked with the switch mechanism that it may be opened only when the switch is in the "OFF" position.

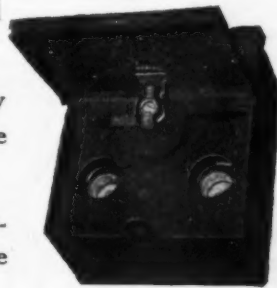
Protection to Motor—Thermal cutouts or relays protect the motor from overload both when starting and while running. The switches are quick make and quick break.

Simplicity—All WK 10 and 20 Motor Starters are of the Rotary Snap Switch Type. The motor is started by turning the switch to the "ON" position and stopped by turning to the "OFF" position.

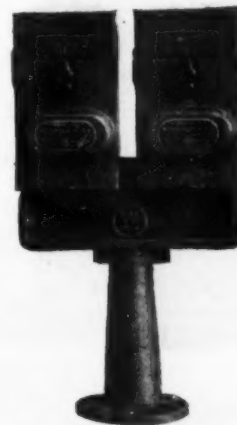
Ease of Installation and Repair—The switches are small, of light weight and compact. Junction boxes and pedestals have been designed so that the starters can be mounted in pairs very near the floor.

Our nearest jobber will be glad to show you where your market lies and how it can best be worked. Write us today.

Westinghouse Electric and Manufacturing Company
Mansfield Works Mansfield, Ohio



Westinghouse WK 20
Safety Motor Starter



Westinghouse WK 10
Safety Motor Starter
mounted on pedestal

Westinghouse

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST



Christmas Christ

The National Ad

Santa and his Westinghouse Appliances will be seen in eight million homes, by everyone in the family. He will appear in the Saturday Evening Post, the Ladies' Home Journal, Good Housekeeping, and Sunset.

The Small Santa

Dozens of little Santas, each ready to broadcast the spirit of Christmas giving from your windows, counters, and shelves, and then to go into the homes of your customers, (one with each appliance purchased), there to announce the name of the donor of the gift.

The Folder

Santa again, on the cover of an attractive six page folder which will carry the message of the worthwhile gift into the homes of your customers. A complete line of appliances suitable for gifts are shown.

The Broadside

The broadside will make a fine poster—the inside contains a large picture of the Santa, with a buying message. Stick it in your window, or tack it on the wall. Every reiteration of this Christmas idea helps to sell appliances.

The Large Santa

Jovial, rosy and plump, he is the spirit of Christmas personified. Children passing your store with their parents will stop to "See Santy." The parents will see, too. They will see Santa—and also the appliances which so easily solve the problem of what to give for Christmas.

Dealers' Display Service

Of course the Westinghouse Santa Claus will appear in the dealers' window display service.



Westinghouse

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

Spirit Makes mas Sales

The thought of Christmas starts everyone thinking of Christmas trees, of candles, of hanging up stockings—and gift giving. Everywhere Santa Claus stands as a symbol of Christmas—that is why he is the central figure in the Westinghouse Christmas Campaign.

The jovial Westinghouse Santa Claus will appear in Westinghouse advertisements in the magazine—he will be on the cover of the folders you distribute—he will appear in your window—and every time he is seen he will be surrounded by electrical appliances.

Get the Christmas Spirit! Get a Westinghouse Santa Claus to stimulate your Christmas trade. He will remind the folks of the coming of Christmas and 'rouse in them the spirit of giving—while the accompanying appliances will answer the ever-present question, "What shall I give?" Let the Westinghouse Santa be your high-powered holiday salesman.

Here is a real Christmas idea that is a winner. Direct-by-mail Folder 4814 covers every detail of the campaign.

Westinghouse Electric and Manufacturing Company
Mansfield Works Mansfield, Ohio

With every appliance
W.C. 224

Dealers
Broadside

National
Advertisement

Poster
for your
window

Folder 4567

W. C.
223

Westinghouse

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST



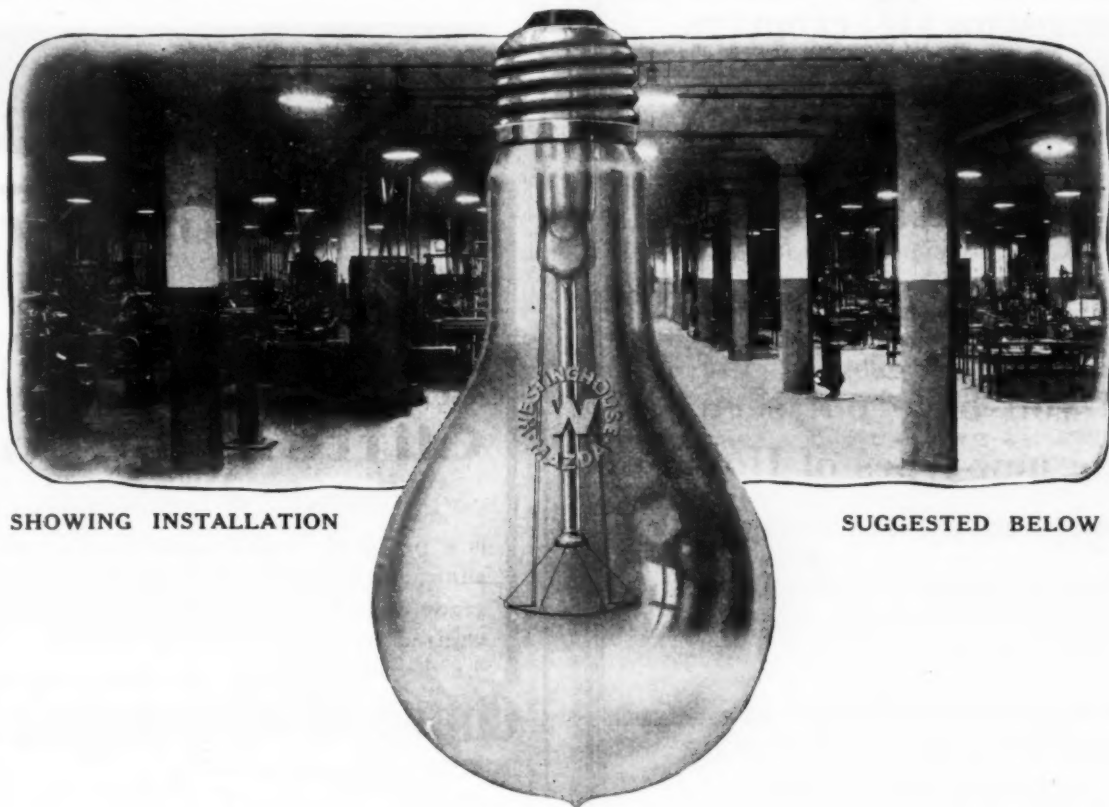


Catalogue 40-A and
Folder 4466-A will
help you sell good
Industrial Lighting

Westinghouse Electric & Manufacturing Company
George Cutter Works South Bend, Ind.

Westinghouse

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST



SHOWING INSTALLATION

SUGGESTED BELOW

Safety, Accuracy, Speed!

The rare gas with which the bulb of a Westinghouse Mazda C Lamp is filled, permits the burning of the filament at a higher intensity than is possible in a Mazda B Lamp.

This concentration of increased luminous energy produces a bright, white light easily controlled by the use of Westinghouse Cutter RLM Reflectors, resulting in greater safety for the workmen—a finer accuracy in their work—and a general speeding up of production.



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Sales Offices and Warehouses Throughout the Country

For Canada: CANADIAN WESTINGHOUSE CO., Ltd., Hamilton, Canada

Westinghouse

ELECTRAGISTS USE THE PRODUCTS OF ADVERTISERS IN THE ELECTRAGIST

DISTRIBUTOR  PRODUCTS

Heaters

are again in demand

If you have not seen
the new types of Hot-
point and Simplex, or-
der a sample at once

THE PHILADELPHIA ELECTRIC
COMPANY SUPPLY DEPT.
130-132 South Eleventh Street
Philadelphia



The Contractor

wants a conduit with clean threads and smooth interiors so that he can install and fish it easily. And for the sake of his customer he wants a conduit protected from rust.

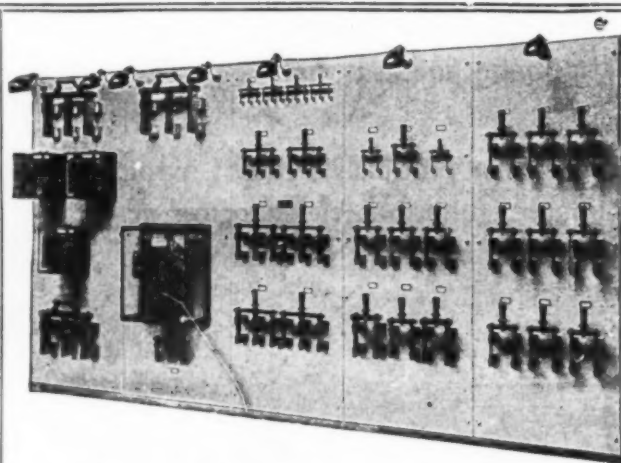
Clifton Conduit

Enameled or Galvanized,

is a practical conduit exactly suited to the contractor's needs. It is made from high-grade steel pipe carefully enameled or galvanized to protect it from corrosion. And the threads are sharp.

Clifton Manufacturing Co.

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NEW YORK, 26 Cortlandt Street
BUFFALO, 34 Sayre Street
SAN FRANCISCO, 509 Mission Street
CHICAGO, 9 So. Clinton Street
Friction Tape. Splicing Compound.



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PANEL BOARDS
STEEL CABINETS
KNIFE SWITCHES
LET US
FIGURE
YOUR
REQUIREMENTS.
**WM. WURDACK
ELECTRIC MFG. COMPANY
ST. LOUIS, MO.**

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: : : :

They Simplify Your Estimating

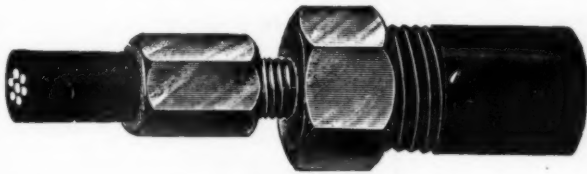
*Get a Supply
from*

**ASSOCIATION OF ELECTRAGISTS
INTERNATIONAL**

Formerly National Association of Electrical Contractors
and Dealers.

**15 West 37th St.,
New York**

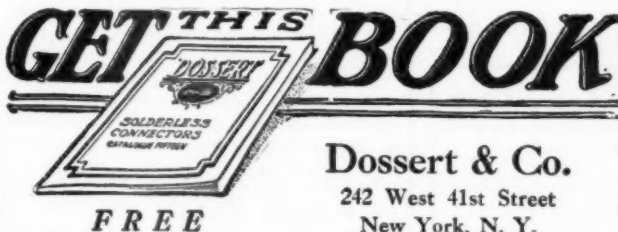
**This is the way to
connect ground wires to
the end of a pipe**



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(Solderless)

Simply another way of using the Dossert Tapered Sleeve principle to simplify the work and to promote efficiency.

The fifteenth year book gives you many suggestions on good wiring methods.



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Underwriters of Special Class Insurance at Cost
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ENAMELED CONDUIT
STANDARD
PATENTED

*Reaches
the job
ready to
install*



More Speed!

INCREASE efficiency and cut installation costs by using Pittsburgh Standard.

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And it costs no more than ordinary enamelled conduit.

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NEW LOW PRICE MADE
JULY 17TH



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plus
5
minutes**

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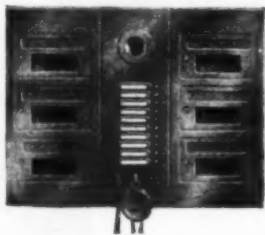
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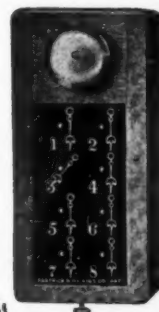
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your jobber about it and if
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For more than a score of years the Guth organization has been striving to make its ideal of better lighting and more distinctive lighting fixtures certain of realization.

Today, with a line of lighting equipment that meets every standard need, supplemented by the advice and counsel of Guth designers and engineers in building special designs, Guth offers the dealer a line worthy of his fullest confidence and support.

With Brascolite—the largest selling lighting fixture in the world—as its leader, the Guth line provides a variety of the right styles and sizes with which to meet every lighting need—all marketed on a fixed policy which guarantees to the dealer a satisfactory profit.

The Guth sales plan is designed to help you sell. It's worth an investigation. Write for full information and copy of catalog just issued.

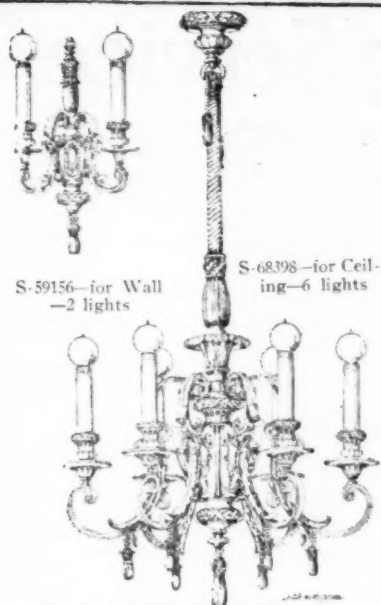
The EDWIN F. GUTH COMPANY
DESIGNERS - ENGINEERS - MANUFACTURERS
Lighting Equipment

ST. LOUIS, U.S.A.

Formerly the St. Louis Brass Mfg. Co. and the Brascolite Company

BRANCH OFFICES (Sales and Service)

Atlanta Boston Chicago Cincinnati Detroit Los Angeles
Minneapolis New Orleans New York Omaha Philadelphia Seattle



S-59156—for Wall
—2 lights

S-68398—for Ceiling—6 lights

These two beautiful residence fixtures are typical of our very complete line of decorative home lighting units.

MAGIC-LITE—a new enclosed unit—gives a brilliant light without glare. A spring attachment with thumb release makes it easy to remove the globe for cleaning or refitting with lamp-bulb—an exclusive feature.

Furnished in 3 types, 4 sizes of each, to accommodate lamps from 75 to 500 watts.



ELITE—a highly efficient, 2-piece glass unit for bedrooms, sun parlors, breakfast rooms, etc.
Type EAG with ornamental shade each.....\$10.00
Type EAK with plain shade each.....8.00
Chain hanger \$2 additional. Switch \$1 extra.

AGLITE, JUNIOR—for bath rooms, bed rooms, etc. Easily installed—connects directly to house wires.

Type AGW without switch.....\$3.20
Type AGWS with pull switch.....3.70
Type AGX without switch.....3.20
Type AGXS with pull switch.....3.70
Type AGY without switch.....5.50
Type AGYS with pull switch.....6.00

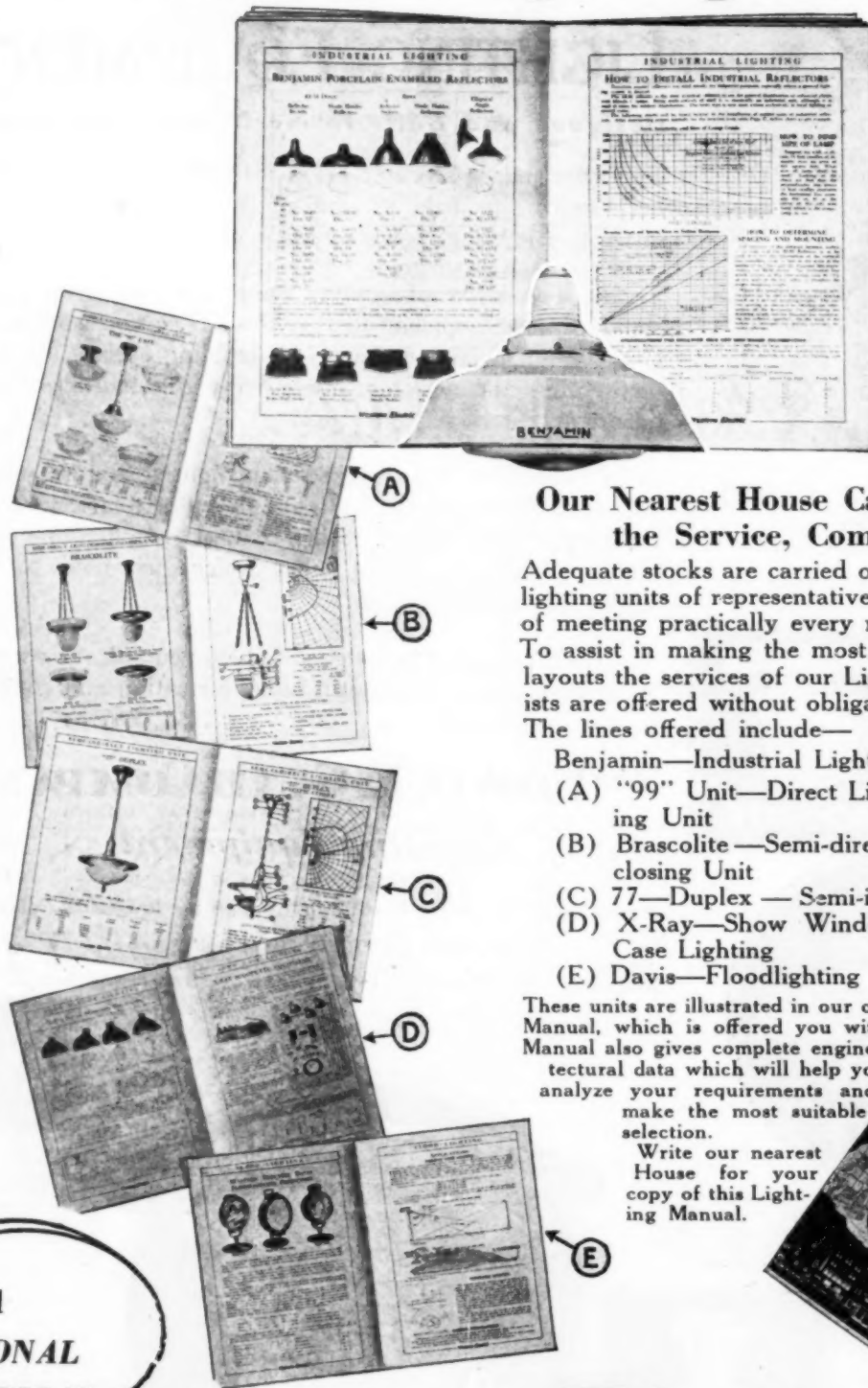


The Guth hall mark, identifying each product of the Edwin F. Guth Company, stands for the highest integrity of quality and workmanship.

TYPE WF
Brascolite with one-piece ceiling band in old gold. White porcelain enameled reflector border in old ivory. Bowl of high efficiency white glass, 200 watt size. Price \$30.00.
Brascolites in less ornamental, less expensive types are available, all possessing the same efficiency characteristics.

"Notice the Lighting Equipment"

A Complete Lighting Service



Our Nearest House Can Provide the Service, Complete

Adequate stocks are carried of a full line of lighting units of representative types capable of meeting practically every requirement. To assist in making the most advantageous layouts the services of our Lighting Specialists are offered without obligation.

The lines offered include—

Benjamin—Industrial Lighting

(A) "99" Unit—Direct Lighting Enclosing Unit

(B) Brascolite—Semi-direct — Semi-enclosing Unit

(C) 77—Duplex — Semi-indirect Unit

(D) X-Ray—Show Window and Show Case Lighting

(E) Davis—Floodlighting

These units are illustrated in our complete Lighting Manual, which is offered you without cost. The Manual also gives complete engineering and architectural data which will help you analyze your requirements and make the most suitable selection.

Write our nearest House for your copy of this Lighting Manual.

A
NATIONAL
ELECTRICAL
SERVICE

Western Electric Company

OFFICES IN ALL PRINCIPAL CITIES

WAKEFIELD

SPECIFICATIONS

Induce architects and building owners to buy hangers that meet the Wakefield Specification, and you'll get the business at a good profit by bidding on **RED SPOT**.

Specifications for Chain Hangers

CANOPIES: All canopies for single light pendants to be not less than $\frac{5}{8}$ " diameter and made of 22 B&S gauge brass, with adequate slip ring and set screw.

HOLDERS: All holders for single light pendants to be of 22 B&S gauge brass and equipped with three holder screws having beveled ends or other approved safe holding device. Sockets must be located at, or adjusted to, the position required to bring lamp in proper relation to the glassware specified. Holders for 200-watt units or larger to be equipped with a means or device to compensate for lack of balance in glassware so that complete units shall hang even.

STEMS: All stems to consist of solid cast brass loop tapped for $\frac{1}{4}$ " iron pipe nipple, 24 B&S gauge brass casing and $\frac{1}{4}$ " x $\frac{3}{16}$ " iron hickey. All wire-ways to be properly reamed and free from rough edges.

CHAIN: All chain to be of solid brass not less than No. 5 B&S gauge, and having a tensile strength of not less than 50 pounds.

GENERAL: All units to be wired with No. 14 stranded asbestos covered wire. All units must have approval of National Board of Underwriters. No sprayed-on finish shall be used on any circuit.

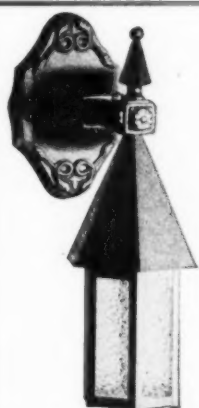


Wakefield has demonstrated to the lighting industry that there is good profit in good hangers. Those who have adopted the "Red Spot" Hanger as their standard, find that they get more business, earn more profit, and have better satisfied customers.

The F. W. WAKEFIELD BRASS COMPANY

125 Walnut Street, Vermillion, Ohio

**Good Profit in
Good Hangers**



No. GB-262



302

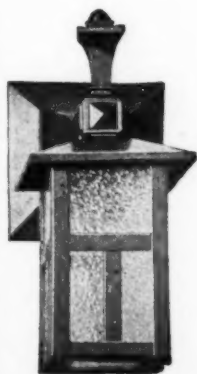
NOVELTY CLEVELAND



304



No. LC-53



No. WB-136



No. WB-66

Pleasing Numbers of Outdoor Lighting Equipment

All of these numbers are meeting with enthusiastic reception from dealers and builders everywhere. Your customers will be pleased with them.

The Novelty line of Outdoor Lighting Equipment is complete and up-to-the-minute. New designs are constantly being brought out to harmonize with new architectural plans.

Get the habit of buying your outdoor lighting equipment from specialists in that class of equipment. We are specialists and will be glad to help you solve your outdoor illumination problems.

**NOVELTY LAMP & SHADE CO., Dept. B,
2488 E. 22nd Street,
CLEVELAND, OHIO**

"Notice the Lighting Equipment" *On Porch
and Entry*

BULLDOG SAFETY SWITCHES



You'll Be Proud of Everyone

You will refer with pride to every "BULL DOG" Safety Switch job that you have ever installed.

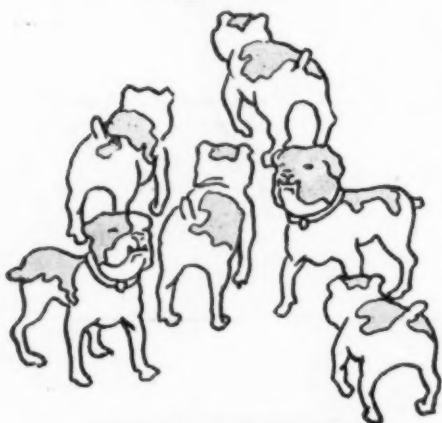
Buying better safety switches which cost less to install cuts your final cost, helps you land the job on a quality basis, and brings gratifying profits and satisfied customers when the job is finished.

"BULL DOG" Safety Switches were designed to cut the final cost in every possible way.

A number of prominent Contractors have written us that they submitted several makes of safety switches to the Architects and invariably the "BULL DOG" Safety Switch was selected.

You cannot get "BULL DOG" Safety Switches from every Jobber. But you can get them from the Best Jobbers in your city. Remember the "BULL DOG" policy insures full profit to the Contractor.

1. All parts are standardized.
2. Strong, rugged construction.
3. Interlocks.
4. Positive Quick Make and Quick Break.
5. Many well placed knockouts.
6. Removable and interchangeable end plates.
7. Roomy Cabinet, fine appearance.
8. Operation does not depend on screws or springs. All parts are keyed together.
9. Reversible blades—unit blade construction.
10. Type "A" switch parts and Underwriters' Classification "A".



A Catalogue—easy to use
—send for one.

BULLDOG
MUTUAL ELECTRIC & MACHINE CO.
DETROIT MICH. U.S.A.

